INPUT

STRATEGIC MARKET PERSPECTIVE

Desktop Network Support Opportunities

Europe, 1994

Customer Services Programme—Europe

OCTOBER 1994

Desktop Network Support Opportunities

Europe, 1994 –1999

INPUT®

London • Frankfurt • New York • Paris • San Francisco • Tokyo • Washington D.C.

INPUT®

INTERNATIONAL IT INTELLIGENCE SERVICES

Clients make informed decisions more quickly and economically by using INPUT's services. Since 1974, information technology (IT) users and vendors throughout the world have relied on INPUT for data, research, objective analysis and insightful opinions to prepare their plans, market assessments and business directions, particularly in computer software and services.

Contact us today to learn how your company can use INPUT's knowledge and experience to grow and profit in the revolutionary IT world of the 1990s.

SUBSCRIPTION SERVICES

- **Information Services Markets**
  - Worldwide and country data
  - Vertical industry analysis
- **Business Integration Markets**
- **Client/Server Applications and Directions**
- **Client/Server Software**
- **Outsourcing Markets**
- **Information Services Vendor Profiles and Analysis**
- **EDI/Electronic Commerce**
- **U.S. Federal Government IT Markets**
- **IT Customer Services Directions (Europe)**

SERVICE FEATURES

- Research-based reports on trends, etc. (Over 100 in-depth reports a year)
- Frequent bulletins on events, issues, etc.
- 5-year market forecasts
- Competitive analysis
- Access to experienced consultants
- Immediate answers to questions
- On-site presentations
- Annual conference

DATABASES

- **Software and Services Market Forecasts**
- **Software and Services Vendors**
- **U.S. Federal Government**
  - Procurement Plans (PAR)
  - Forecasts
  - Awards (FAIT)
- **Commercial Application (LEADS)**

CUSTOM PROJECTS

For Vendors—analyze:

- **Market strategies and tactics**
- **Product/service opportunities**
- **Customer satisfaction levels**
- **Competitive positioning**
- **Acquisition targets**

For Buyers—evaluate:

- **Specific vendor capabilities**
- **Outsourcing options**
- **Systems plans**
- **Peer position**

OTHER SERVICES

Acquisition/partnership searches

INPUT WORLDWIDE

Frankfurt
Sudetenstraße 9
D-35428 Langgöns-Niederkleen
Germany
Tel. +49 (0) 6447-7229
Fax +49 (0) 6447-7327

London
17 Hill Street
London W1X 7FB
England
Tel. +44 (0) 71 493-9335
Fax +44 (0) 71 629-0179

New York
400 Frank W. Burr Blvd.
Teaneck, NJ 07666
U.S.A.
Tel. 1 (201) 801-0050
Fax 1 (201) 801-0441

Paris
24, avenue du Recteur Poincaré
75016 Paris
France
Tel. +33 (1) 46 47 65 65
Fax +33 (1) 46 47 69 50

San Francisco
1881 Landings Drive
Mountain View
CA 94043-0848
U.S.A.
Tel. 1 (415) 961-3300
Fax 1 (415) 961-3966

Tokyo
Saida Building, 4-6,
Kanda Sakuma-cho
Chiyoda-ku, Tokyo 101
Japan
Tel. +81 3 3864-0531
Fax +81 3 3864-4114

Washington, D.C.
1953 Gallows Road
Suite 560
Vienna, VA 22182
U.S.A.
Tel. 1 (703) 847-6870
Fax 1 (703) 847-6872

M&S 459/01 2/94

Abstract

The continued spread of PC local-area networks (LANs), and the growing importance of the desktop domain, have opened up new service needs within organisations, and hence new opportunities for customer services vendors. However, vendors face difficulties in targeting this fast-moving, complex market.

This report analyses the market for desktop network services, and describes the best areas of opportunity for services vendors. More specifically, the report:

- Provides a detailed breakdown of the market by sector, and includes market sizing and five–year growth forecasts
- Presents a corporate profile of desktop networks, including analyses of the user types, and the desktop equipment and software products in use
- Describes the current state of support for desktop networks, including user satisfaction data
- Looks at users' future plans for desktop network support, and reveals user attitudes to external service suppliers.

The report recommends ways in which services vendors can position themselves to realise the significant opportunities presented by this important market.

Research by
INPUT
17 Hill Street
London W1X 7FB
United Kingdom

Published by
INPUT
1881 Landings Drive
Mountain View, CA 94043-0848
United States of America

Customer Services Programme–Europe

Desktop Network Support Opportunities Europe, 1994–1999

CSSQ• 612• 1994

Table of Contents

Exhibits

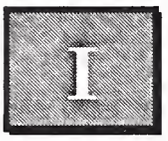
IV

V

VI

A

B



Introduction

This report was produced as part of INPUT's 1994 Customer Services Programme in Europe.

A Objectives

The continued spread of PC local area networks (LANs) and the growing importance of the desktop domain have opened up new service needs within organisations, and hence new opportunities for customer services vendors. However, this is a fast-moving, complex market which vendors face difficulties in targeting.

The purpose of this report is to provide European customer services vendors with an analysis of current conditions relating to the support of LANs and the desktop environment served by LANs. In particular, the objectives of the report are to:

- Provide market sizing and growth forecasts, and identify the best areas of opportunity for services vendors
- Present a corporate profile of desktop networks, including analyses of the user types, and the desktop equipment and software products in use
- Describe the current state of support for desktop networks (including user satisfaction data), and identify users' future plans for desktop network support.

B
Scope

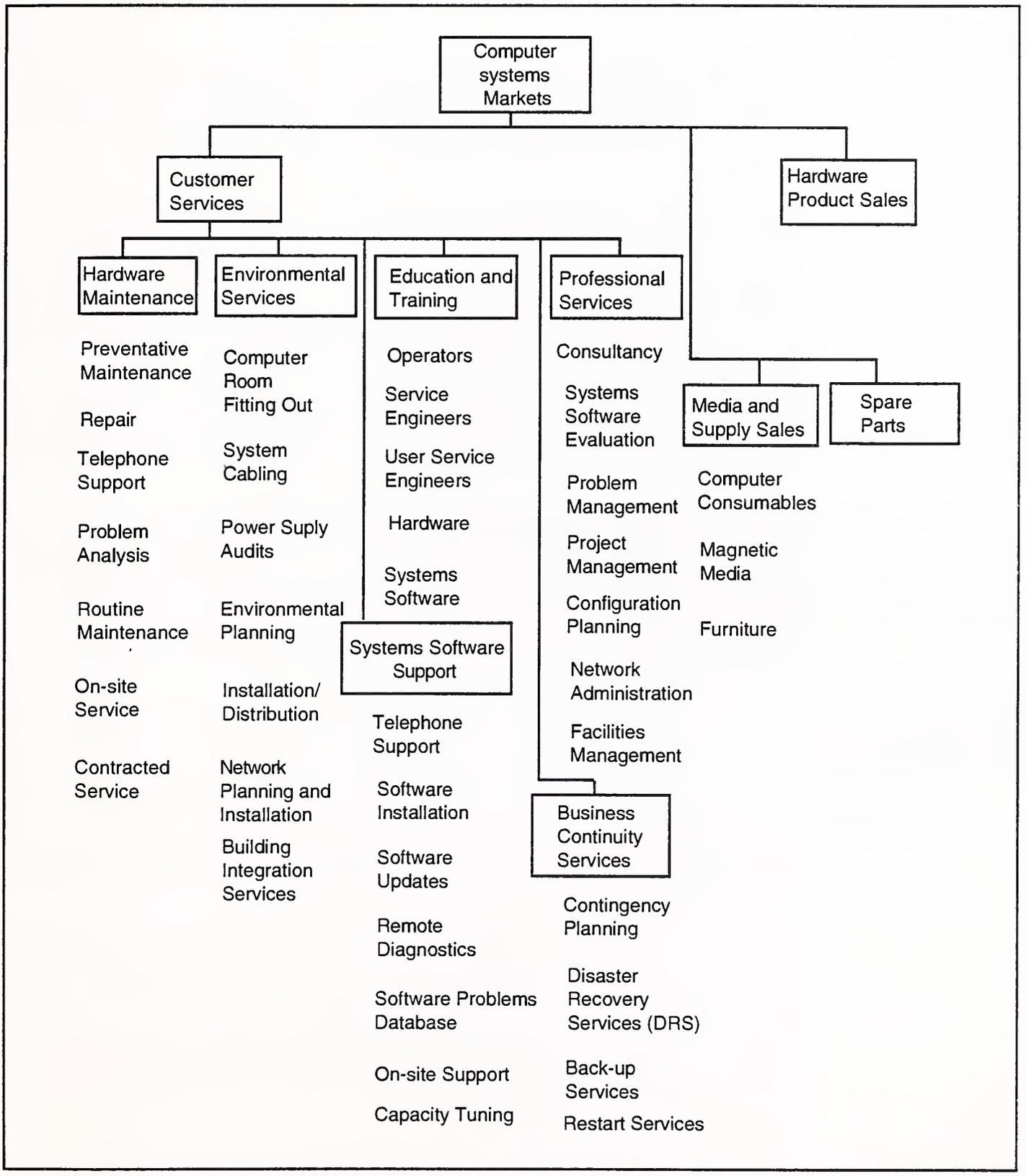
INPUT's definition of the customer services market identifies six separate market sectors, as shown in Exhibit I-1. Services related to desktop networks cover five of those sectors, namely:

- Equipment Services
- Systems Software Support
- Education and training
- Professional services
- Business continuity services.

For the purposes of market sizing (see Chapter III), this report *excludes* environmental services.

Exhibit I-1

Customer Services Market



Source: INPUT

C
Methodology

This study is based upon field research conducted in the user and vendor communities. This is supported by INPUT's continuous researching the European customer services markets.

The user research employed a standard questionnaire (see Appendix C) designed to identify key user issues in respect of support for desktop networks. Ninety interviews were conducted by telephone in Germany, France and the United Kingdom in May 1994. Respondents were selected to represent a random sample of managers with responsibility for LAN installations; three-quarters of the sample were IS Managers with direct operational responsibility, the other quarter were business managers with overall responsibility for the LAN environment.

Vendor-related information was obtained from direct communication (both telephone and face-to-face interviews) with major European service vendors from within the IT industry. This information was supplemented by INPUT's continuous research of the customer services industry within Europe.

D
Report Structure

The remaining chapters of this report are organised as follows:

Chapter II is an executive overview that summarises the major findings and recommendations of the report

Chapter III contains an analysis of the market for the support of desktop networks, including sizing and growth forecasts

Chapter IV presents a corporate profile of desktop networks, including analyses of the user groups, and of equipment and software products being used

Chapter V describes the current state of support for desktop networks, including user satisfaction data

Chapter VI looks at users' future plans for desktop network support and reveals user attitudes to external service suppliers.

Appendix A contains the text of an INPUT Research Bulletin which describes how two leading open services vendors are currently addressing the implications of distributed IT responsibility within organisations.

Appendix B contains the text of an INPUT Research Bulletin which analyses the control of spending on desktop services within organisations.

Appendix C contains the questionnaire used for the user telephone survey.

E
Related INPUT Reports

Other INPUT reports which address topics related to the subjects discussed here include the following:

Customer Services Market Analysis and Forecast - Europe, 1993-1998 (October 1993)

Desktop Services Outsourcing - Europe, 1994 (June 1994)

Equipment Service Contracts in an Open Environment - Europe, 1993 (April 1994)

Systems Software Support Contracts in an Open Environment - Europe, 1993 (June 1994)

User Issues and Trends in European Customer Services (February 1993)

Open Systems Services Challenges and Strategies - Europe (March 1993)

Blank

II

Executive Overview

A
Service Need Shifts From Maintenance to Operational Support

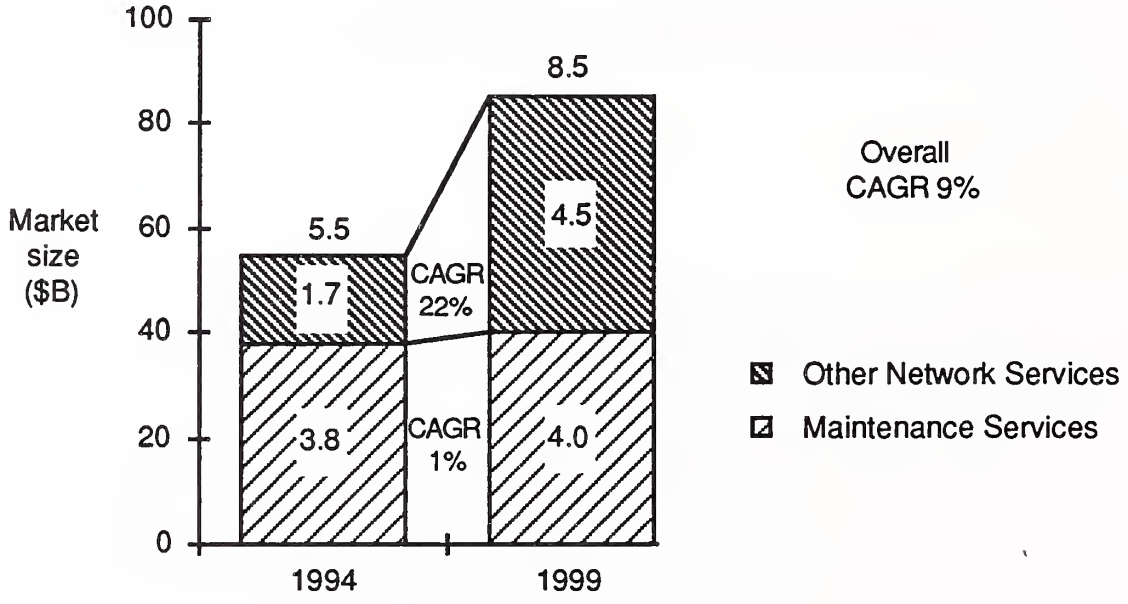
The continued spread of local-area networks (LANs), and the growing importance of the desktop domain, have changed the dynamics of the services market dramatically. Whereas once service needs were based upon a centralised computing paradigm, now those needs have spread and diversified throughout organisations, and are increasingly concerned with enabling business processes rather than simply maintaining the systems supporting those processes.

However, this is a fast-moving, complex market and customer services vendors face difficulties in targeting and exploiting business opportunities. The first and the simplest step towards understanding this market is to break it down into its two principal components—maintenance services and other support services.

Exhibit II-1 shows the total European market for desktop network services to be worth $5.5 billion in 1994, and forecasts 9% growth over the next five years. However, the maintenance element is growing at only 1% CAGR over five years, whereas all other services are growing at a combined rate of 22% CAGR.

Exhibit II-1

Desktop Network Services–Europe
Maintenance vs. Non-Maintenance Services



Source: INPUT

Maintenance services account for 70% of the total market at present. However, this is forecast to fall to 45% by 1999. Of the maintenance services, network equipment (including server) maintenance is forecast for 9% growth, but this is expected to be offset by desktop computer maintenance which is in decline (10% negative growth over the next five years). This reflects the ultra–reliability of desktop equipment, the use of extended warranty, and the increasing reluctance of organisations to take out maintenance contracts.

The major opportunities lie in the non-maintenance sectors of the market, as detailed in Exhibit II-2. This shows that the markets for fully outsourced services and for a variety of individual support services are set for substantial growth. In particular, *network management and monitoring services*, though currently only 2% of the market, represent the fastest growing sector (38% CAGR over five years).

Exhibit II-2

Desktop Network Services Growth, 1994-1999 ($M)

	1994 Expenditure	1999 Expenditure	CAGR (%)
Outsourced Services	400	1300	27
Network Management and Monitoring	100	500	38
Network Support Services:	**700**	**2000**	**22**
Software Support	300	600	15
Business Continuity	100	200	15
Other Services (e.g. Help Desk)	300	1200	30
Training and Education	500	800	10
Equipment Maintenance:	**3800**	**2800**	**1**
Network Equipment	1800	2800	9
Desktop Equipment	2000	1200	(10)
TOTAL	**5500**	**8500**	**9**

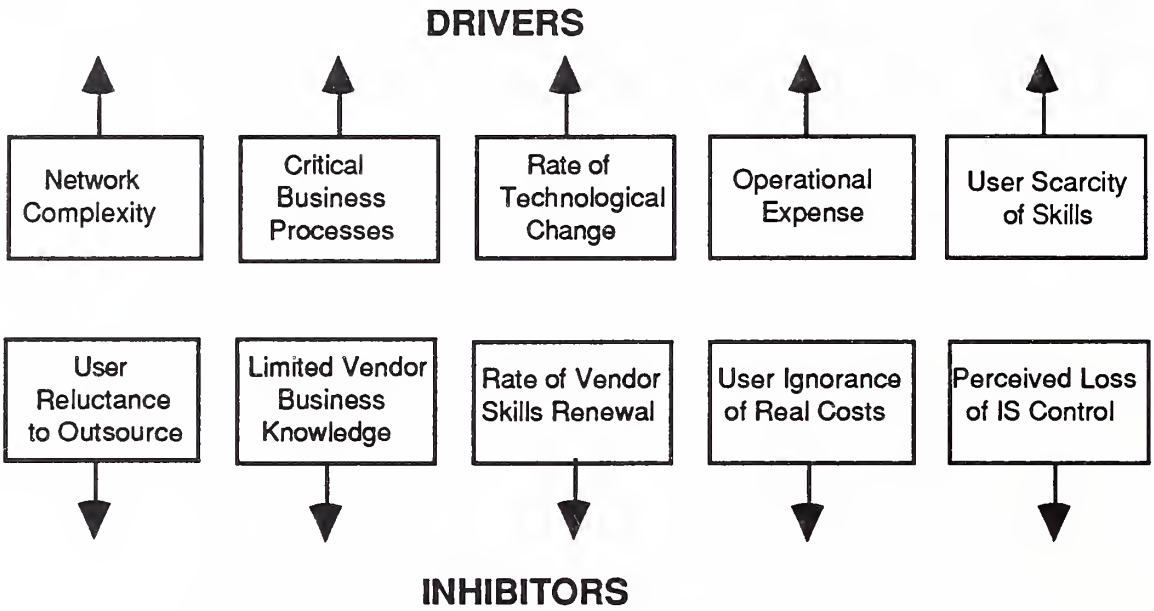
Source: INPUT

The growth potential for network management services such as remote monitoring, diagnostics, configuration management and asset management is substantial since 95% of organisations currently either rely on in-house provision, or have no provision at all in these areas. Many organisations are struggling to integrate local-area networks which have grown up independently of one another, and are finding the task of network management very difficult.

However, customer services vendors cannot expect to win this business easily. As shown in Exhibit II-3, a number of conflicting factors affect the ability of vendors to penetrate this market.

Exhibit II-3

Network Management Services—Drivers and Inhibitors



Source: INPUT

The principal difficulties faced by services vendors relate to user attitudes and expectations. Though many organisations are experiencing difficulty in the management of their desktop networks, they often underestimate the true extent of their support need. Also, to date, organisations have been reluctant to relinquish responsibility for operational management, fearing loss of control from the user IS groups.

In summary, vendors wishing to succeed in this difficult market must acknowledge, and act upon, a number of important issues. Vendors are advised to:

- Continuously refresh their skill sets, to keep pace with the rate of technological advancement. Many organisations are reluctant to use external service suppliers for the management of their networks, but are highly selective in terms of the scope and relevance of skills demonstrated by potential suppliers

- Appeal to different levels of personnel within organisations. The IS function is increasingly distributed throughout companies. Also, business management and operational user management are becoming more involved in IS decision–making, which presents an even wider target for services vendors

- Develop marketing strategies aimed at increasing user awareness of service needs. Organisations commonly fail to appreciate the significant costs of distributed desktop computing, and consequently underestimate the true extent of their support need.

B
Technological Change Drives Need for Skills Renewal

The continued growth of the PC installed base and the rapid expansion of corporate LANs has increased demand for network sophistication and integration. The result has been a proliferation of products, standards and protocols. Without doubt, the complexity now resides with the network rather than the equipment.

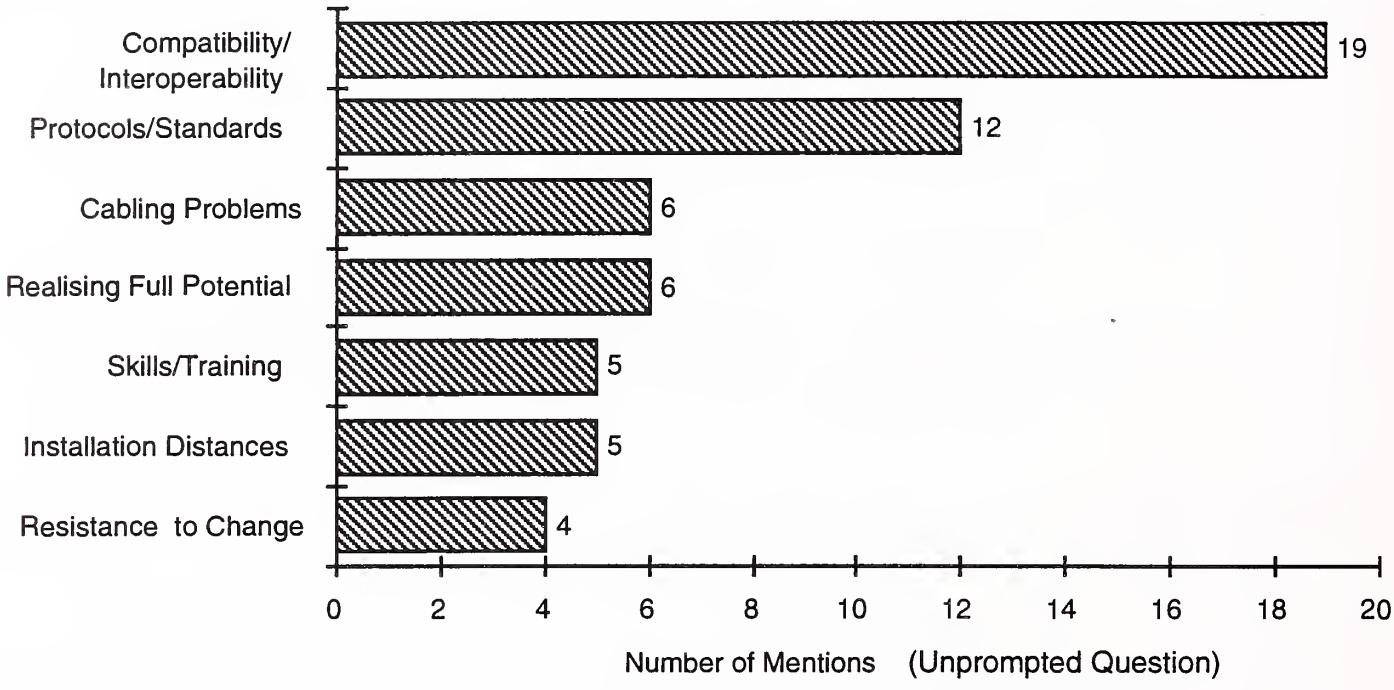
Exhibit II-4 indicates that users acknowledge the complexity of networked environments, and point to both physical and logical causes. Physical problems such as connectivity, the use of multiple protocols and difficulties with cabling are amongst the greatest concerns. The indications are that users are encountering significant problems related to the diversity of LAN systems, which reflects the uncoordinated way in which many corporate networks have grown in recent years.

Also of considerable concern are the logical problems which LAN-based computing presents, such as how to realise the full potential of networked systems given the enormous computing power and information resources at users' disposal.

There is also evidence of continuing resistance to making the transition from the datacentre to a fully distributed computing environment.

Exhibit II-4

Principal User Problems with Networked Computing



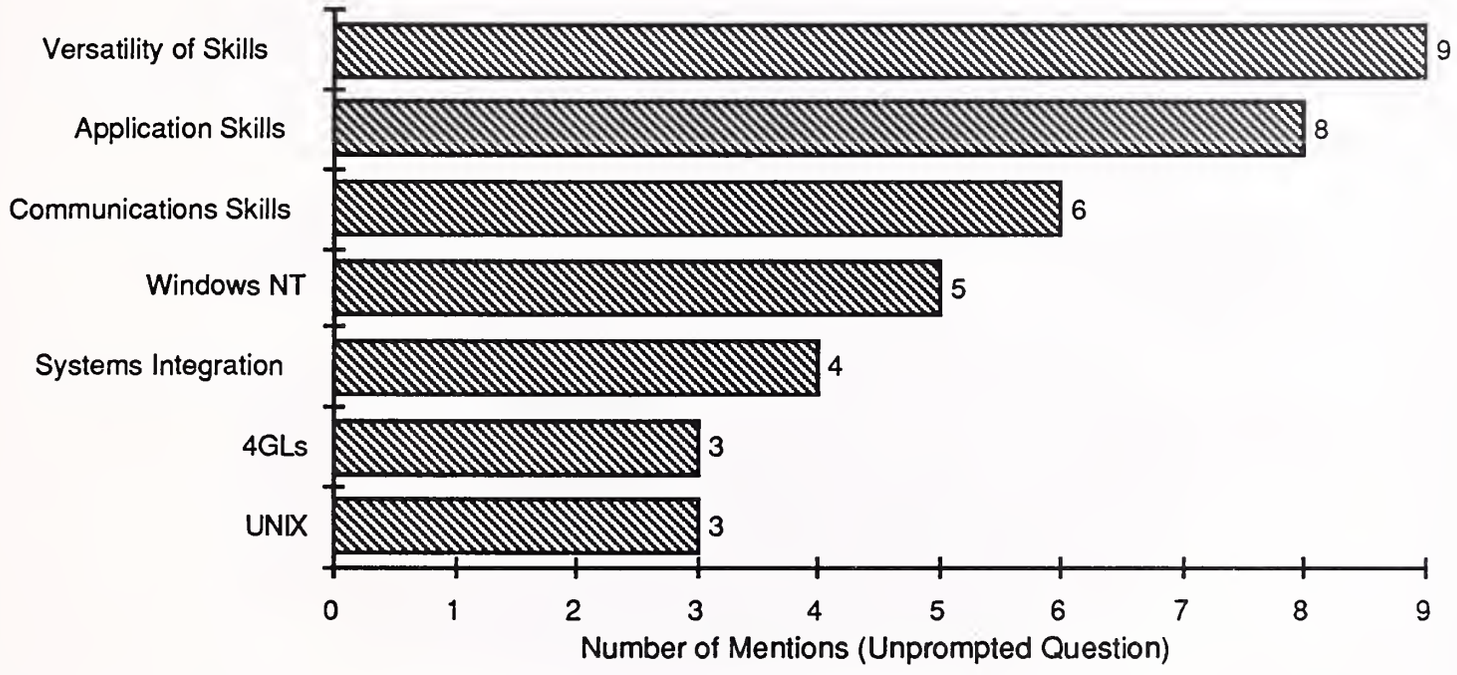
Sample of 90 respondents. *Source: INPUT*

Organisations are beginning to acknowledge the inherent complexity of their networked environments. However, they are most likely to select vendors who can demonstrate specific experience in the services they require. Users are less impressed by general experience and vendor reputation.

Furthermore, user comments suggest that certain combinations of skills such as OS/2 and Novell, or Lotus and Microsoft, are considered valuable but rare. Exhibit II-5 shows that versatility is perceived to be the scarcest network-related skill.

Exhibit II-5

Scarcest Network Skills



Sample of 90 respondents. *Source: INPUT*

Above all, organisations are looking for skills in the most critical fields and in the latest technology. For example, the growing urgency with which organisations require isolated LANs to be integrated is accelerating the need for advanced network integration skills. Successful vendors will be those who continuously refresh their in-house skills *and* seek strategic alliances with other suppliers who can offer distinctly different but complementary skillsets.

C
Service Scope is Enterprise-Wide

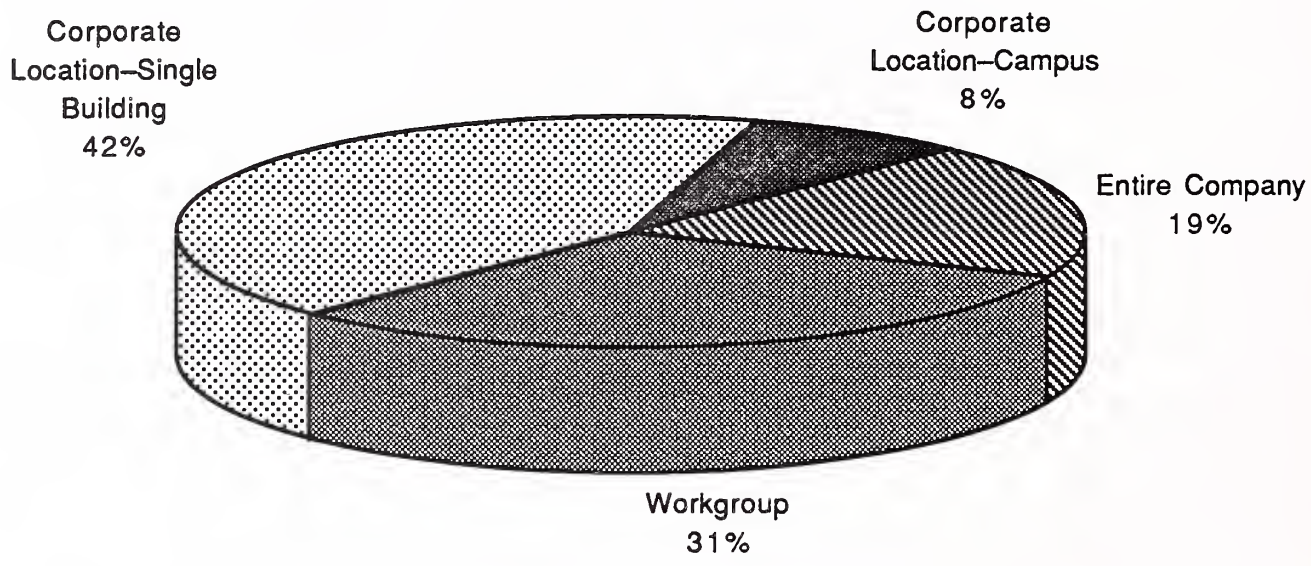
Most corporate network infrastructures are characterised by their lack of coherence and integration. In most cases, individual business units have implemented their own local networks which have operated independently of one another.

However, there is increasing strategic and financial pressure to integrate these networks on an enterprise-wide basis.

Exhibit II-6 shows the composition of corporate networks in terms of geographic scope.

Exhibit II-6

Geographic Scope of Corporate LANs



Source: INPUT

Just as the scope of network services is enterprise-wide, so the IS function responsible for providing those services is increasingly distributed throughout the organisation. In the past, customer services vendors were able to deal directly with a central IS department, but they are finding this situation less and less common. At the same time, business management and operational user management are becoming more involved in IS decision making, which presents an even greater challenge for services vendors.

In this climate of organisational change, vendors must achieve broader customer visibility by appealing to different levels of need, as shown in Exhibit II-7. One method of achieving this is to market the concept of partnership, whereby vendors and customers collaborate to achieve tailored service solutions.

Exhibit II-7

Addressing Customer Needs Within an Organisation

IS Managers	Business Managers	Department Managers
• Ensuring service levels to users • Management and control of IS infrastructure • Service delivery to strict quality standards (ISO9000)	• Ensuring continuity of business operations that depend on distributed IS infrastructure • Enabling focus on core business by outsourcing non-core, routine or difficult IS operational tasks • Help in managing electronic assets, in terms of cost-effectiveness and control	• Full support for the resolution of departmental IS problems • Rapid response from support and service engineers at a local level • Better service levels ensured by regularly measured Service-level Agreements

Source: INPUT

D
Marketing to Promote Awareness of Service Need

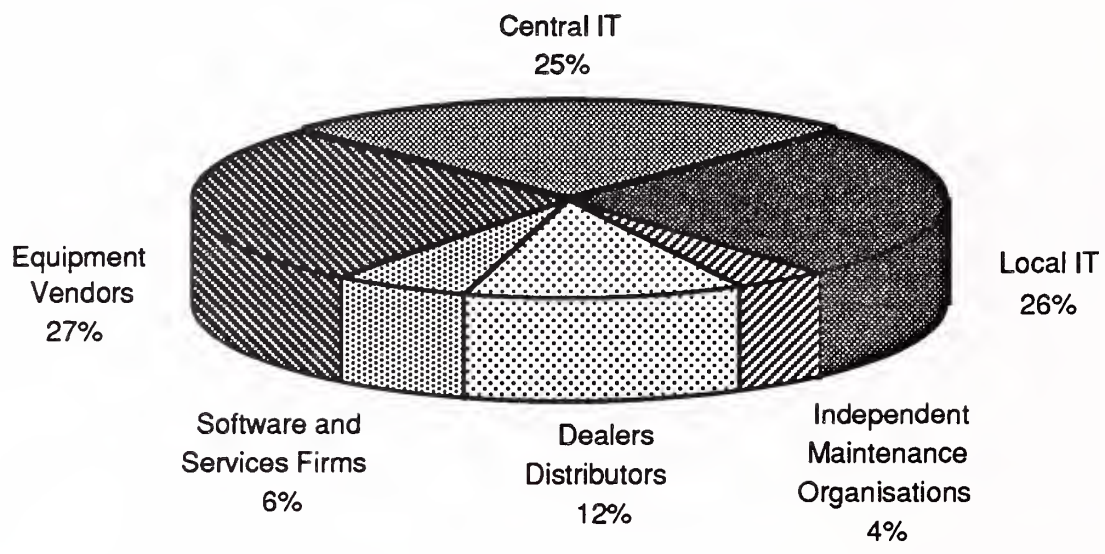
Organisations may be facing difficulties in the management of their desktop network infrastructures, but they frequently underestimate the full extent of their support need. Furthermore, organisations are reluctant to relinquish responsibility for operational management, fearing loss of control from the user IS groups.

The supply profile for desktop network services is shown in Exhibit II-8. Overall, in-house IS groups are the suppliers in just over half of organisations, while the network and desktop/server

equipment vendors are the leading third-party suppliers with 27%. However, a more detailed analysis of the supply profile shows a clear distinction between the kinds of services organisations are prepared to subcontract and those which are retained in-house.

Exhibit II-8

Suppliers of Desktop Network Services

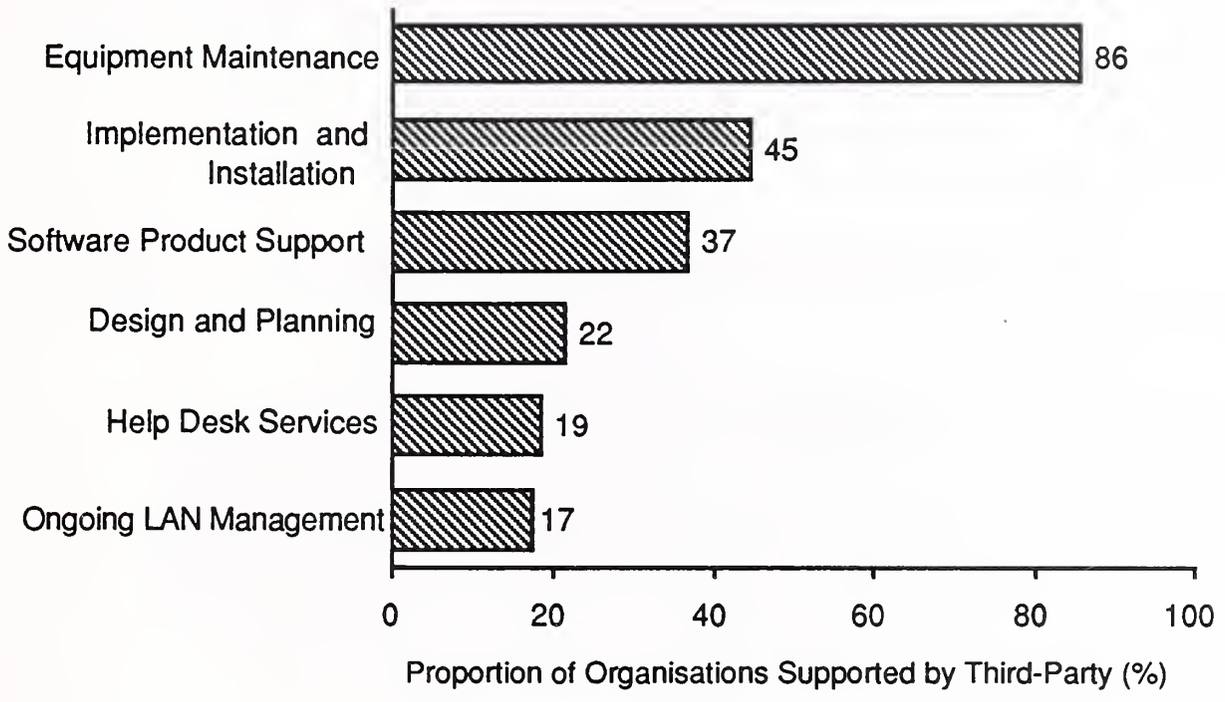


Source: INPUT

Exhibit II-9 shows the extent to which organisations currently use third parties to support key elements of their desktop networks. In the great majority of cases, equipment is maintained by a third party, and in over 50% of cases this is an equipment vendor. About half of organisations still appear to need assistance in installing and implementing LANs, but much smaller proportions of companies continue to use a third-party for ongoing support in the form of software support, help desk services or LAN management.

Exhibit II-9

Third-Party Service Delivery

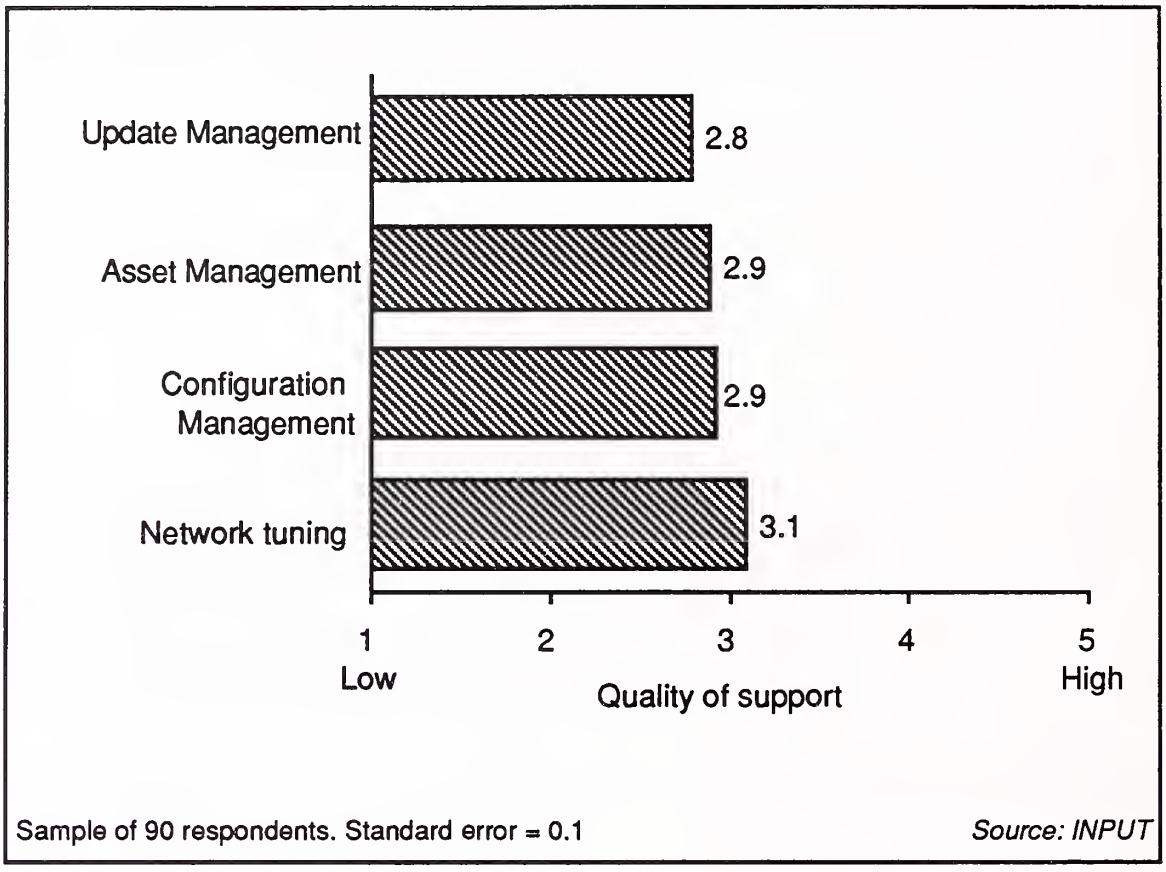


Sample of 90 respondents. *Source: INPUT*

In-house IS groups are typically responsible for ongoing LAN management and user support services. However, while organisations claim responsibility for operational support, there are signs that in-house groups are not always able to deliver quality services. Exhibit II-10 shows that some of the network management services usually supplied in-house are amongst the worst-supported functions.

Exhibit II-10

Areas of Low Satisfaction with Desktop Services



Sample of 90 respondents. Standard error = 0.1 *Source: INPUT*

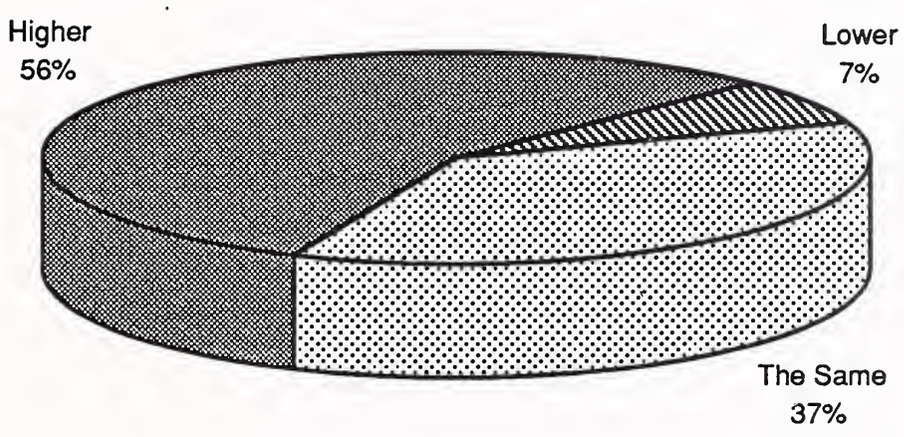
If asset management and update control are not performed to a satisfactory standard, the resultant incompatibility can be detrimental to an organisation's productivity and effectiveness. The tendency for autonomous business units to decide the timing and scope of equipment and software purchases makes control very difficult, and highlights the need for an enterprise-wide, managed service. Vendors must emphasise the strategic importance of these services when developing their network services portfolios.

Further evidence of the shortcomings of in-house service capability is suggested by the apparent confusion regarding the use of LAN management software tools. The user survey revealed that 10% of organisations do not use a network management tool, 20% are unsure which, if any, tools they use, and 10% are evaluating products.

However, as shown in Exhibit II-11, organisations are beginning to acknowledge the need for greater support of their desktop networks and anticipate spending more on external services and personnel over the next few years. However, vendors still face a steep challenge in translating this potential into real business.

Exhibit II-11

User Spending on External Services and Personnel by 1997



Source: INPUT

Vendor marketing strategies must encourage users to appreciate the benefits of collaborating with technical specialists in this key area of network management. This is essential if vendors are to continue their transition from reactive maintainers of equipment to proactive partners in the provision of value-added services.

Perhaps the greatest marketing challenge facing vendors is the need to educate users to acknowledge, and act upon, the real costs of distributed desktop computing. Organisations commonly fail to appreciate the significant hidden costs which arise from inadequate formal training and poor asset management and version control. Inadequate training leads to misuse of telephone help desk services and ad hoc support by peers, while poor asset management and version control can seriously impact operational efficiency.

Arguably, services vendors have been guilty of overselling the concept of ease of use in the past. However, the idea that

information distribution and availability at the desktop are synonymous with ease of use and cost efficiency is misconceived.

Vendors now face the delicate task of educating users to the full extent of their desktop support need as they position themselves to target this important market opportunity.

III

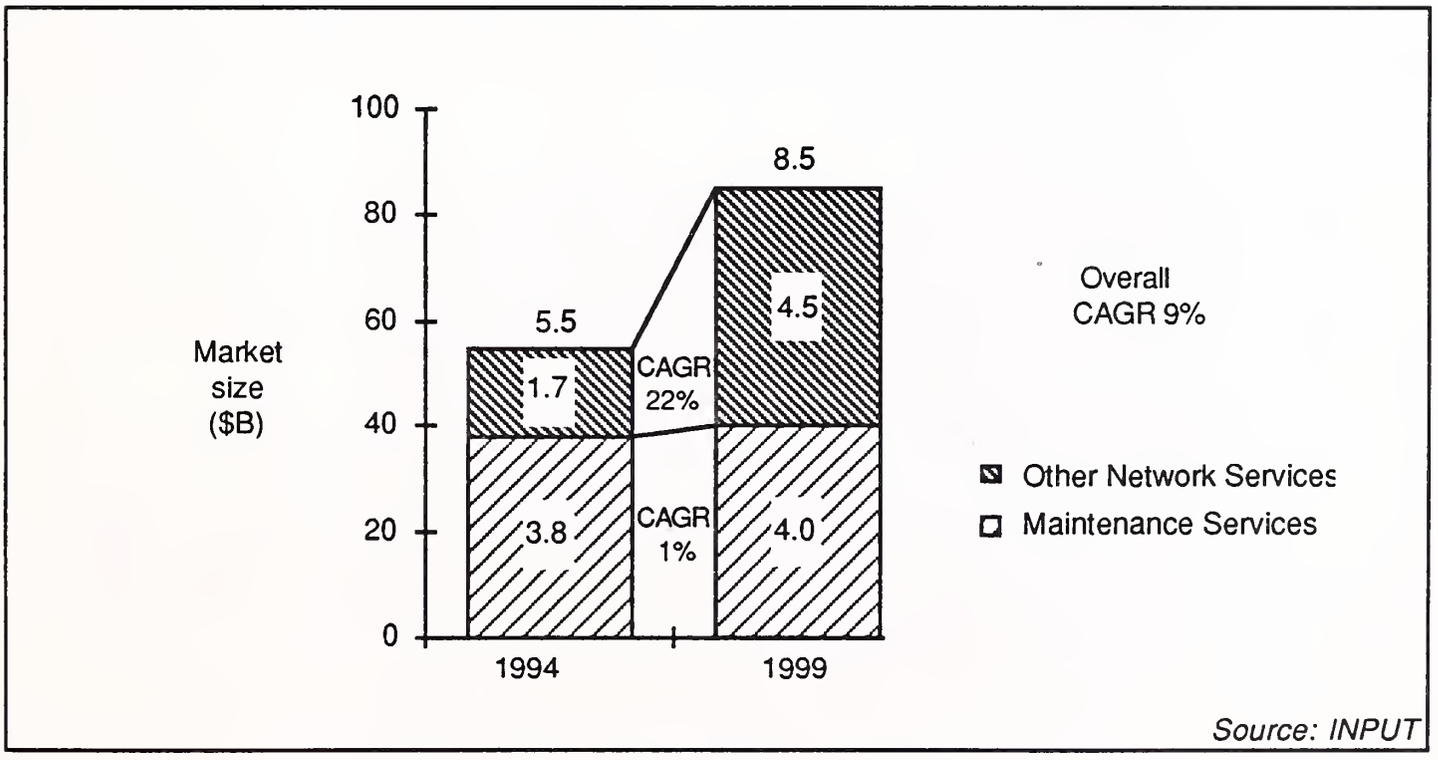
The Market for Desktop Network Support Services

A
Market Sizing and Growth

The total European market for services related to desktop networks is estimated to be $5.5 billion and is forecast to grow at 9% CAGR over the next five years. However, as shown in Exhibit III-1, the market can effectively be viewed in two distinct parts:

Exhibit III-1

Desktop Network Services Growth—Maintenance vs. Non-Maintenance Services



Source: INPUT

- Maintenance services related to network equipment and desktop computers, which is growing at only 1% CAGR
- All other services, which are growing at a combined rate of 22% CAGR.

Note that for the purposes of market sizing, the model includes elements of all the customer services sectors defined in Chapter I, *except for* environmental services (which includes cabling and installation). A detailed breakdown of the market components and their relative sizes is shown in Exhibit III-2.

Exhibit III-2

Desktop Network Services–Market Components

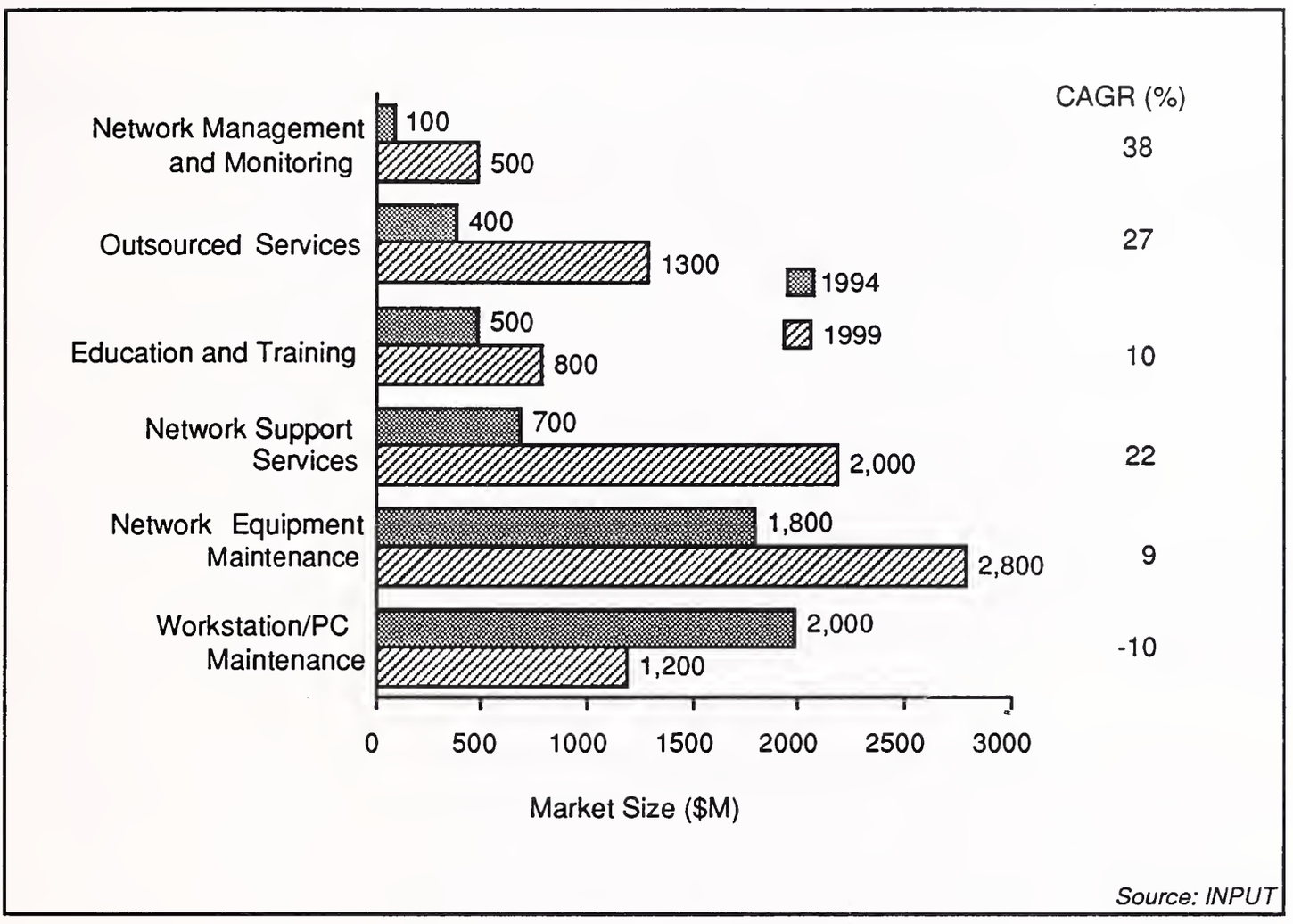
Service Component	1994 Expenditure ($m)	Proportion of Market (%)
Outsourced Services	400	7
Network Management and Monitoring	100	2
Network Support Services:	**700**	**12**
Software Support	300	5
Business Continuity	100	2
Other Services (e.g. Help Desk)	300	5
Training and Education	500	9
Equipment Maintenance:	**3,800**	**70**
Network Equipment	1,800	33
Desktop Equipment	2,000	37
TOTAL	5,500	100

Source: INPUT

Exhibit III-3 shows five-year growth forecasts for the component parts of the desktop network market.

Exhibit III-3

Desktop Network Services Growth, 1994-1999 ($m)



Source: INPUT

Maintenance services account for 70% of the total market at present. However, this is forecast to fall to 45% by 1999. Of the maintenance services, network equipment (including server) maintenance is forecast for 9% growth, but this is expected to be offset by desktop computer maintenance which is in decline (10% negative growth over the next five years). This reflects the ultra-reliability of desktop equipment, the use of extended warranty and the increasing reluctance of organisations to take out maintenance contracts. However, the maintenance of network equipment continues to be a growth market, and will be the focus of increasing competition between the equipment vendors, the independent maintenance organisations and the channels.

The market for non-maintenance network services can be divided into four components, as shown in Exhibit III-2. The largest component is *network support services*, which are the ongoing

services such as software support, business continuity (disaster recovery), help desk services and system administration. These services combined are forecast to grow 22% CAGR by 1999.

Network support services are sold mainly as point services or as integrated services which make up customised network support solutions. However, 7% ($400 million) of services are supplied as fully outsourced contracts with major outsourcing vendors. The market for outsourced services shows substantial growth potential (27%), but this is a relatively small, specialist market. This area is dominated by a few service vendors who have targeted the outsourcing market specifically; they include EDS, Hoskyns, SHL, ITNet and Computacenter. Also active in this market are a number of equipment vendors who have created specific units to target the outsourcing market; these include IBM, Hewlett-Packard, Digital and ICL.

The smallest, but fastest growing market is for *network management and monitorng* services, which includes:

- Proactive remote network monitoring and support
- Monitoring, notification and diagnostics
- Asset management
- Configuration management
- Fault management
- Performance management

As explained in section B, these network services represent the areas of greatest need for many organisations, and hence present good opportunities for services vendors.

B
Network Management Services – A Key Vendor Opportunity

The user survey revealed that 95% of organisations either rely on in-house resources or have no provision at all for network management services. However, in many cases this is the most important network service requirement. INPUT forecasts that network management and related services will grow 38% CAGR by 1999.

This presents a substantial opportunity for services vendors, though, as shown in Exhibit III-4, vendors face a number of challenges in exploiting this market.

Exhibit III-4

Network Management Services Growth Factors

Drivers	Inhibitors
Network complexity	User reluctance to outsource network management
Critical business processes	Limited vendor knowledge of client's business
Rate of technological change	Rate of vendor skills renewal
Operational expense	User ignorance of real costs
Scarcity of network skills (user)	Perceived loss of control for user IS

Source: INPUT

The installed base of network equipment has grown rapidly in recent years, in which time network-related services have largely been provided on a piecemeal basis. In most cases, corporate networks have grown in an uncoordinated fashion, with business units taking purchasing decisions in isolation of one another. As more and more network equipment, desktop devices and software products have been added, so the complexity of installations has grown enormously, and this is an ongoing process.

Furthermore, driven by the phenomena of downsizing and client/server technology, the development of networked systems has become increasingly mission-critical to organisations. Users are not only having to support extremely complex systems, but they are becoming increasingly aware of the consequences to their business of inadequately managed support.

The mounting cost of networked computing is another important factor influencing the growth of network management services. To a certain extent, the cost of network operations is closely linked to the complexity of the network. However, there are many hidden costs associated with desktop networks which users are frequently unable, or reluctant, to acknowledge.

One such hidden cost is associated with the perceived simplicity of networked applications. Because information is readily available at desktops throughout an organisation, it is commonly thought to be easy to access and manipulate. The result is that users are often reluctant to invest in formal training, and rely on telephone help desk support and access to *power users* to solve simple operational problems.

The misconception that information distribution and availability are synonymous with ease and efficiency of use incurs hidden, but real, costs. The costs of misusing help desk facilities and of reduced user productivity are hidden, but can be substantial. Educating users to acknowledge, and act upon, the hidden costs of desktop computing is one of the major challenges facing customer services vendors.

Another challenge facing vendors is the need to upgrade their skills to match the speed with which network technology is advancing. Users are most likely to select vendors who have experience in providing exactly the service they require, but also emphasise the importance of versatility of skills. Certain combinations of skills such as OS/2 and Novell, or Lotus and Microsoft, are considered valuable, though rare. The message for vendors is that they must either extend their own skills base, or be prepared to establish partnerships with other suppliers who have complementary skills.

The net result of the various factors described above is that users have a growing requirement for network services which offer more than support for individual items of equipment or software products. Users are increasingly looking to vendors for tailored support solutions, made up of component services plus value-added network management services.

C
Vendor Market Shares

The main players in the desktop network services market are the system and network equipment vendors, the dealer/distributor channels, the independent maintenance organisations (IMOs) and the independent software and services firms. The first three of these groups are competing for maintenance contracts, particularly as a 'way in' to organisations. However, given the marked decline in the maintenance market, all groups are

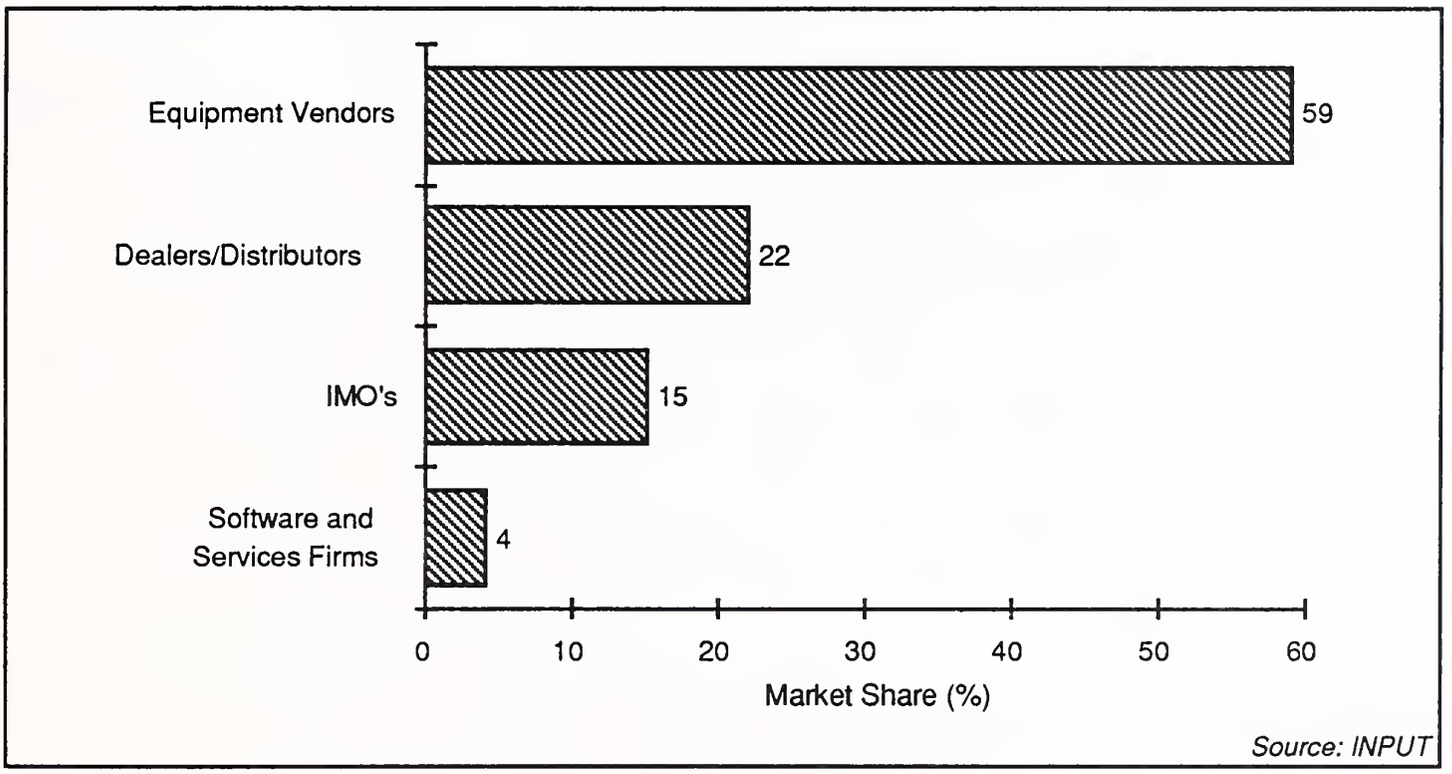
increasingly looking to sign up new business in related service areas.

Note that many of the network equipment manufacturers provide minimal support for their own product range, and rely on services delivered via their distribution channels. Hence, the network equipment manufacturers are not considered as a separate group for the purposes of calculating market share.

Exhibit III-5 shows the shares of the maintenance market held by the main supplier types. Exhibit III-6 gives a similar breakdown for other network support services.

Exhibit III-5

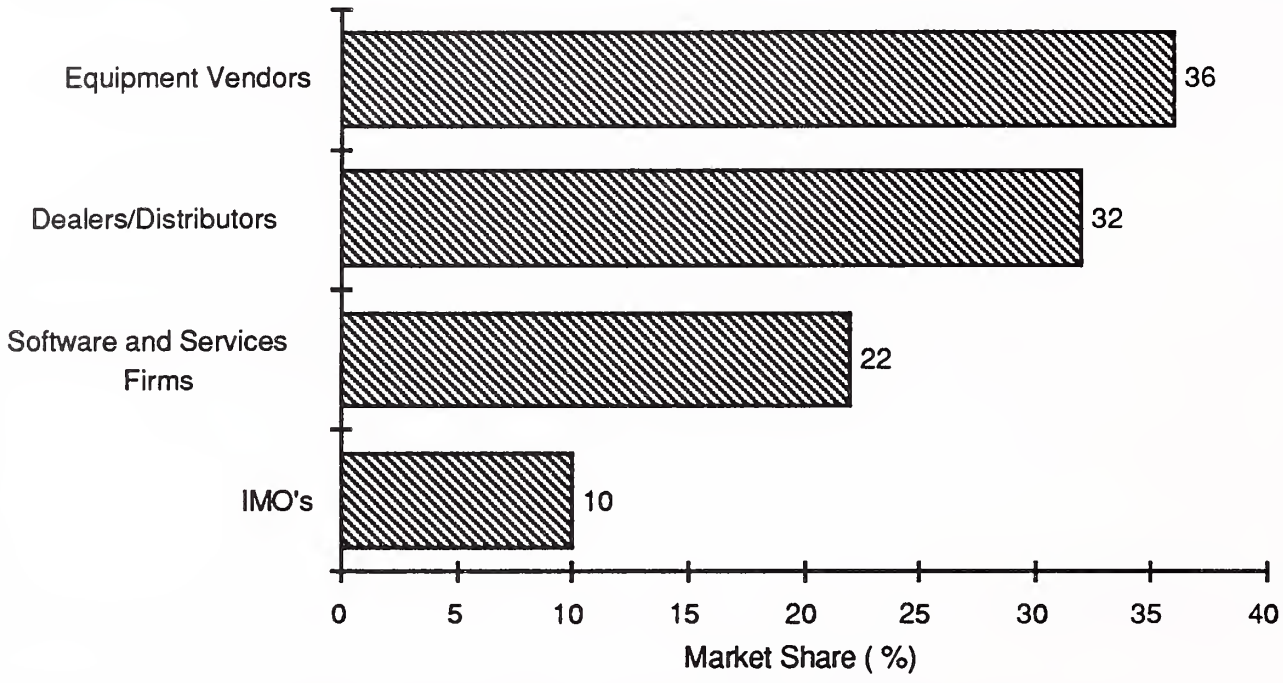
Desktop Network Maintenance Market – By Supplier Type



Source: INPUT

Exhibit III-6

Desktop Network Support Market – By Supplier Type



Source: INPUT

The equipment vendors are the clear leaders in the equipment maintenance market, but for all other network services the vendors face much stiffer competition. The dealer/distributor channel has almost a third of the non-maintenance market, while the independent software and services firms have just under a quarter. The IMOs have the most ground to make up, since they currently have only 10% of the market. This would indicate that the initiatives taken by many IMOs to broaden their service portfolios have yet to make a significant impact in terms of market share.

D
Vendor Initiatives in Desktop Network Services

Customer services vendors can expect to encounter strong competition in the growing market for network support services. A number of leading equipment vendors and independent services organisations have already started to address the emerging opportunities in this key service arena.

It is interesting to note that both groups are positioning themselves as *services integrators* in their efforts to focus on this

market, and a lot of the leading companies are developing integrated service offerings based on a life cycle approach to network services. Below are six examples of recent initiatives.

1. Hewlett-Packard

HP's Custom Services (CS) organisation offers value-added services to complement and extend the traditional maintenance activities of the System Support Organisation. The organisation aims to provide an integrated, ongoing support solution for customers who have open computing environments.

One of CS's key service elements is Network Operations, which was introduced in recognition of the increasing importance of networks to business-critical environments. The *Network Programme* was established to offer customers the network way to a more open environment'. The programme offers a complete, integrated network service from initial consultancy and network design through to operational support.

At the centre of the Network Support Programme is a *roadmap* of how to establish a network solution. The roadmap follows the route from strategic vision, through logical and physical design, to implementation and finally support. At each stage, the roadmap reflects the involvement of the customer, from senior executive to network manager.

HP's clear intention is to offer a one-stop shop for network services, though the roadmap enables customers to select those elements of the networking process with which they most require assistance.

2. Olivetti

Olivetti's customer support organisation offers a wide portfolio of services including technical support, environmental services, multivendor desktop and network services. Network services include consulting, implementation and management.

Key to Olivetti's network capabilities is SUPPORTnet, a remote management, monitoring and diagnostic service. Launched in 1993, SUPPORTnet is operated from a control centre, from where customers' networks are continuously monitored. Customers are alerted to potential problems, and can expect problem resolution

alerted to potential problems, and can expect problem resolution in an average of 15 minutes, compared to four hours in the case of traditional field service.

Olivetti's rationale for investing in SUPPORTnet was the recognition that, with LANs playing an increasingly critical role within organisations, more and more businesses are willing to pay premium prices for high quality support. The development of SUPPORTnet also satisfies Olivetti's desire to offer a range of *proactive* services, and hence to develop its business beyond traditional field service. In these respects, Olivetti is one of the leading service companies currently active in the desktop/network markets.

In addition to network management facilities, the SUPPORTnet service also encompasses other services such as network certification, asset management, software migration, design and planning, performance analysis and training.

3. Cray Communications

Network equipment specialist Cray Communications has a history of strength in the WAN market, and a reputation in the UK as a network equipment maintainer. However, over the last two to three years it has been steadily re-orientating its business, away from traditional break/fix, towards new services markets, principally LAN support.

Cray Communications is aggressively targeting the LAN support market, which currently provides 50% of its service revenues (with plans to grow to 75% by 1995). Based around the provision of network management services (using the DomainView product), Cray offers multivendor network support, project management, education and training, design, performance monitoring and disaster recovery services.

Cray has recognised the trend towards integrated LAN services, and has moved fast to develop a portfolio, which it hopes to extend and market throughout Europe.

4. Sorbus

Independent services firm Sorbus describe itself as a *service integrator,* and so positions itself firmly in the market for integrated network services. Sorbus does not, however, divide or

categorise services, but offers account-focused service solutions including equipment and software installation, maintenance, systems management, software/firmware updates, support and consultancy.

Sorbus offers network management consultancy services, and will also run the customer's own network management software; however, Sorbus does not operate from a network management centre, but places its own personnel into the customer site.

In the last half of 1994, Sorbus is planning to launch a new services initiative called LifeCycle, which promises to offer customers a complete 'cradle-to-grave' service package reflecting the IT life cycle from acquisition and installation, through operational support, to obsolescence.

5. Digital

Digital has a strong tradition as a network specialist, and this is reflected in the range of services offered by the Network Services group: from consultancy and network management through to the management of transmission and messaging services. However, in recognition of the growing importance of the desktop arena, DEC's Desktop Services portfolio is intended to provide customised multivendor service solutions at the desktop and LAN level.

The range of modular desktop services includes Startup, Maintenance, Connectivity, Advisory and Management Services. Connectivity Services will support the transition from standalone to networked desktop environments and provide LAN planning and design services, through to configuration, installation and commissioning.

6. Bull

Bull's TotalCare Services are structured around three elements: systems, desktops and networks. In each of these areas the service offerings are designed to match the typical IT life cycle, from initial consultancy, planning and design, through to implementation, support and operations. Bull will establish which elements of their network service offerings can best complement the skills and expertise of the customer. However, TotalCare is also aimed at those organisations who wish to outsource their entire IT operations.

Many of Bull's recent service contracts have had a strong desktop network element. These include customised solutions aimed at reducing the cost of desktop operations, improving the availability of distributed applications, making the transition to a networked environment, and full LAN and desktop management.

7. Dell

As a logical extension to its offerings in the direct sales PC market, Dell has developed a portfolio of network services which claims to offer a total support solution. Services include cabling, network installation and after-sales support at four levels: from engineer service to full 24-hour telephone support and on-site server support.

Dell provides the most comprehensive network services of the direct vendors, though Viglen, Zenith Data Systems and others are also active in this area. Gateway2000 is also expected to challenge for a share of this market with a network service launch towards the end of 1994.

The direct PC vendors clearly cannot compete with some of the larger vendors in terms of service coverage and the breadth of skills and resources at their disposal. However, they represent one of the many new entrants into the increasingly competitive desktop network market.

IV

Desktop Networks— A Corporate Profile

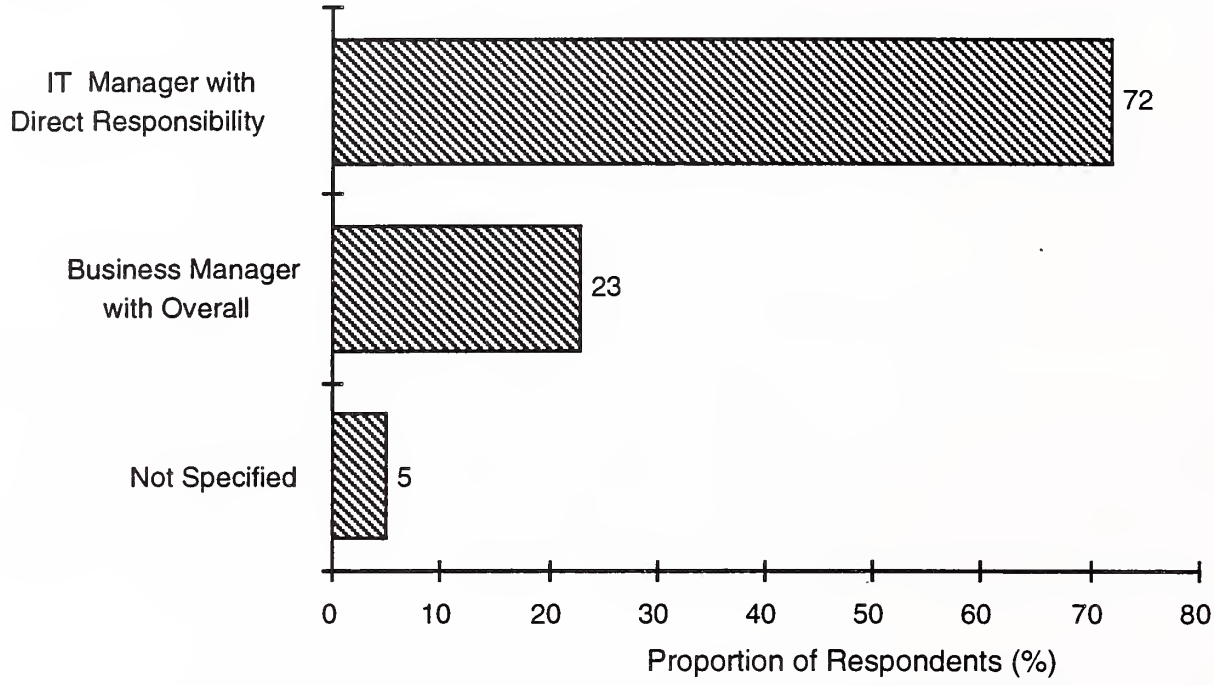
It is essential for services vendors to understand the nature of the business environments they aim to support. This chapter looks at the current use of desktop networks within organisations, including profiles of the user types, and the equipment and software products in use. The chapter also contains LAN network performance statistics and describes user attitudes to network-based computing.

A
The Users of Desktop Networks

The user survey for this study targetted managers with responsibility for desktop network installations. As shown in Exhibit IV-1, approximately three-quarters of the sample comprised IS managers with direct responsibility for managing LANs on a day-to-day basis; about one-quarter were business managers with overall management responsibility for the business unit supported by the network.

Exhibit IV-1

Profile of Users with LAN Management Responsibility

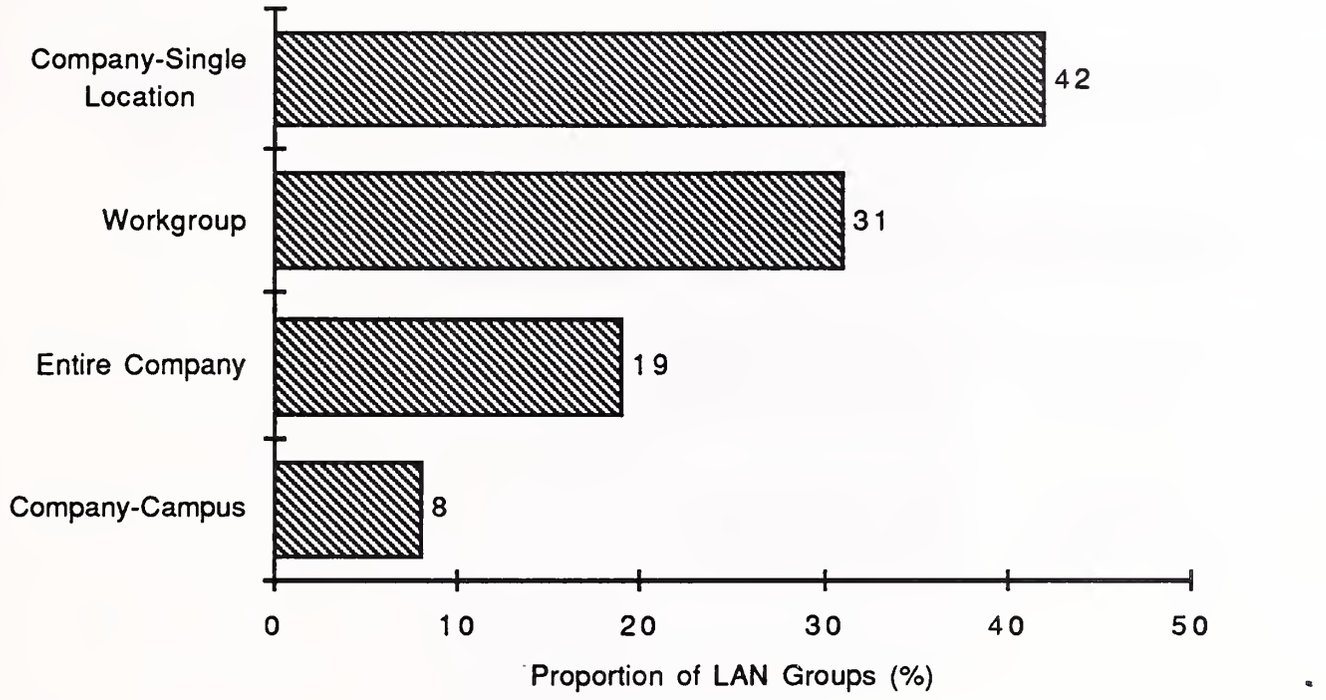


Sample of 90 respondents. *Source: INPUT*

The survey targeted medium to large companies, where the business population supported by desktop networks ranged from small groups of co-workers in a single location to personnel across different departments of a multi-site organisation. Exhibit IV-2 shows the composition of corporate networks in terms of geographic scope.

Exhibit IV-2

Geographical Distribution of LANs



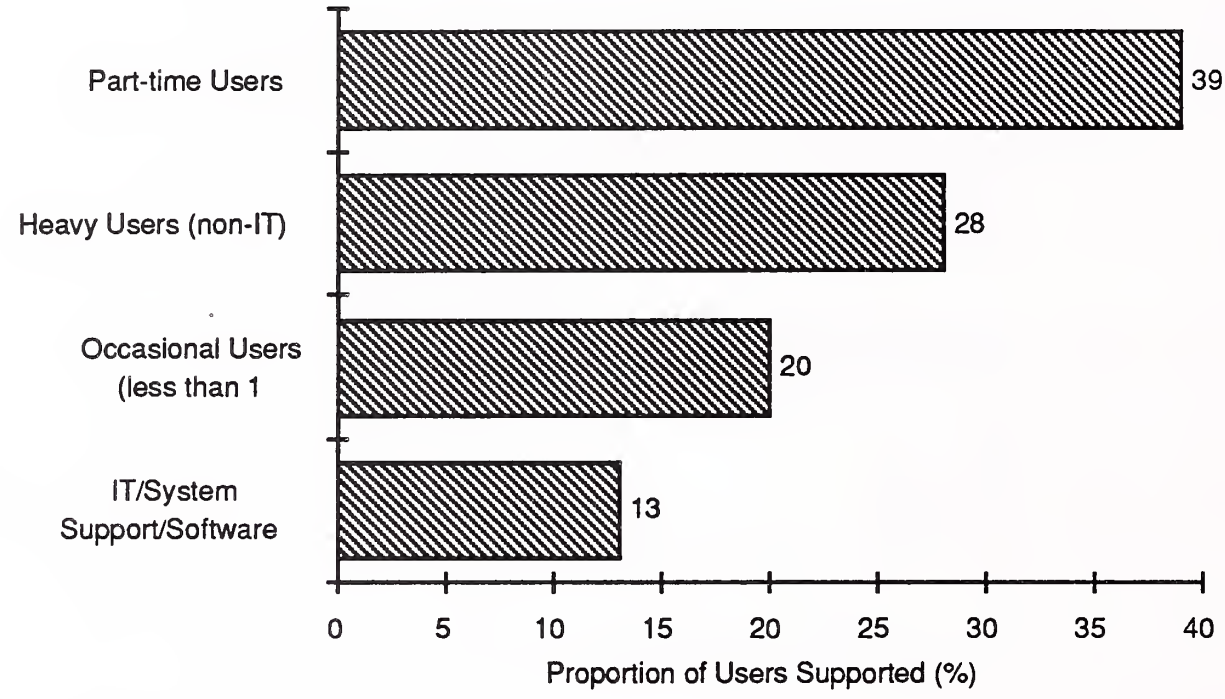
Sample of 90 respondents. *Source: INPUT*

The usage characteristics of corporate desktop networks are summarised in Exhibit IV-3. The largest group of users (approximately 40%) are those who spend between one-third and two-thirds of their time using the network.

About one-quarter of business users make heavy use of networked applications. A further 20% are occasional users who access the network for less than an hour a day to print files or send and receive E-mail. The smallest group of users are IS staff who use the network for system support or software development.

Exhibit IV-3

Desktop Network Usage Characteristics



Sample of 90 respondents. *Source: INPUT*

B
LAN Equipment Characteristics

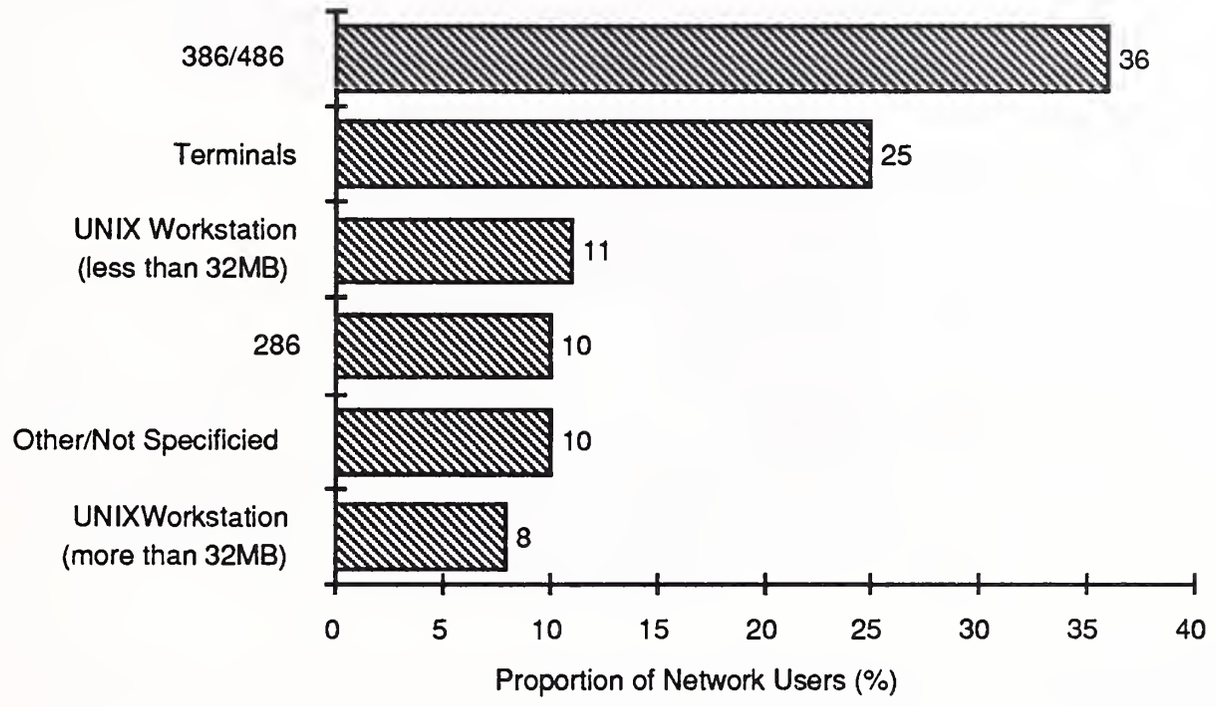
Many corporate networks have grown and been added to over a number of years, without any central coordination. Typically, business units have taken networking decisions locally, with little reference to other parts of the organisation. This uncoordinated expansion has resulted in diversity of equipment and connectivity standards, and inevitable complexity of operation.

The types of networked computer are summarised in Exhibit IV-4. Just under half of users access the network from a PC, most of which are running on 386 or 486 processors. Users of older 286 machines account for 10% of the sample population, while very few users reported using the latest Pentium machines (less than 1%). A quarter of users access the network from a

terminal with limited local processing capability, while almost 20% use UNIX workstations.

Exhibit IV-4

Types of Networked Computer

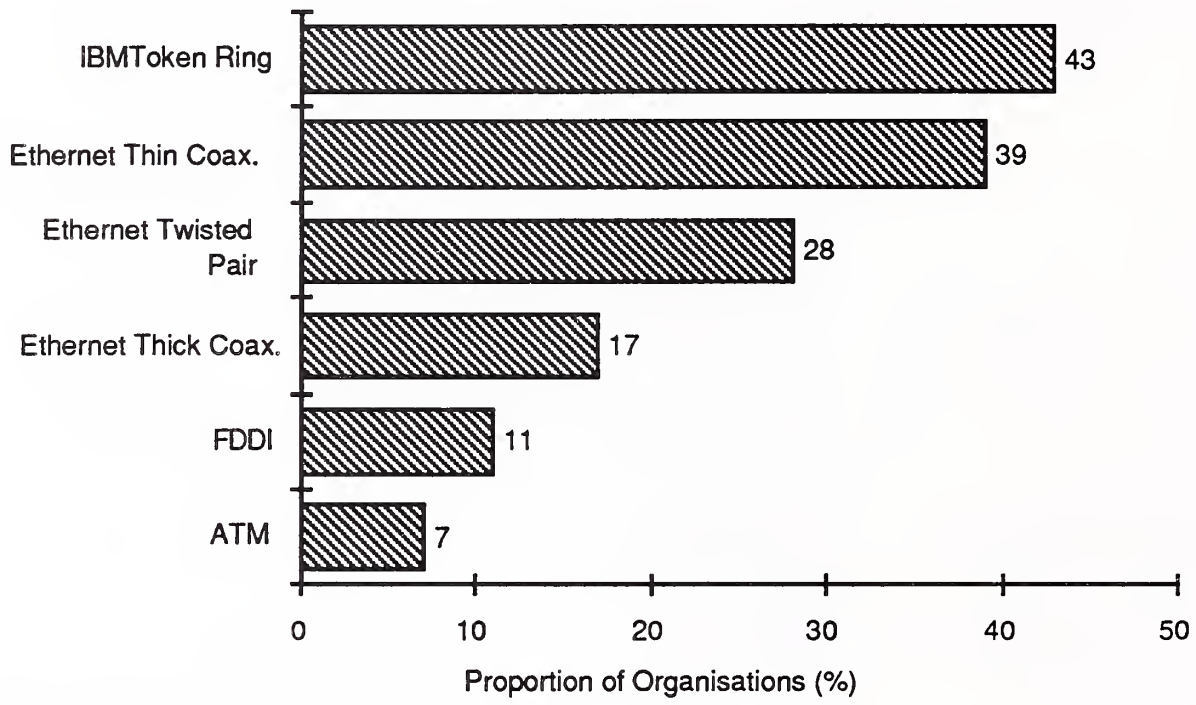


Sample of 90 respondents. *Source: INPUT*

Corporate networks are also characterised by the variety of connection standards in use. Most of the companies surveyed report using two or more standards, with various forms of Ethernet and IBM token ring the most common. Sigificantly, none of the companies surveyed indicated that they were planning to move towards a single standard for network connection. Exhibit IV-5 shows the variety of equipment connection standards and their incidence of use.

Exhibit IV-5

Use of Equipment Connection Standards

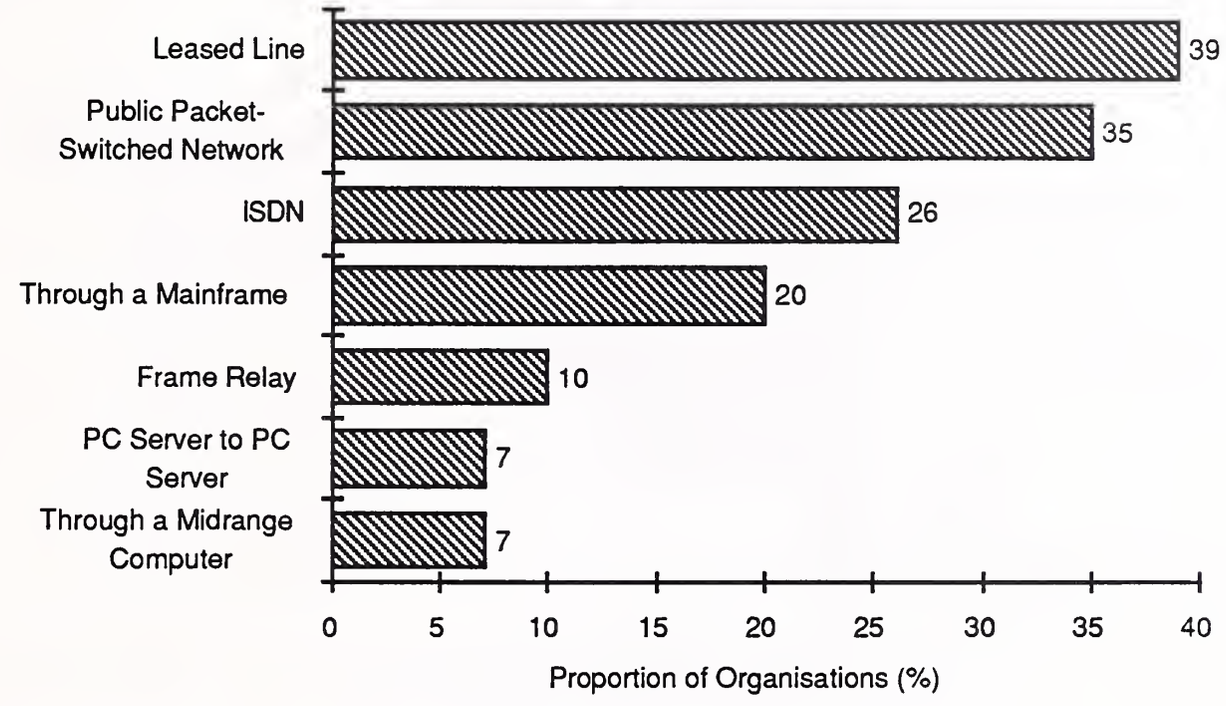


Sample of 90 respondents. *Source: INPUT*

As corporate networks have grown, and the use of routers and bridges has become commonplace, so it has become increasingly difficult, and indeed irrelevant, to define precisely the number of LANs within a company. However, numerous methods are in use for connecting LANs between remote sites, with leased line, public packet-switched network and ISDN the most popular. Almost 40% of companies surveyed have LANs interconnected by more than one means, while an equal number use a single form of remote link. Only 20% of companies surveyed do not have LANs linked. Exhibit IV-6 shows the variety of LAN links in use, and their incidence of use.

Exhibit IV-6

Use of Remote LAN Links



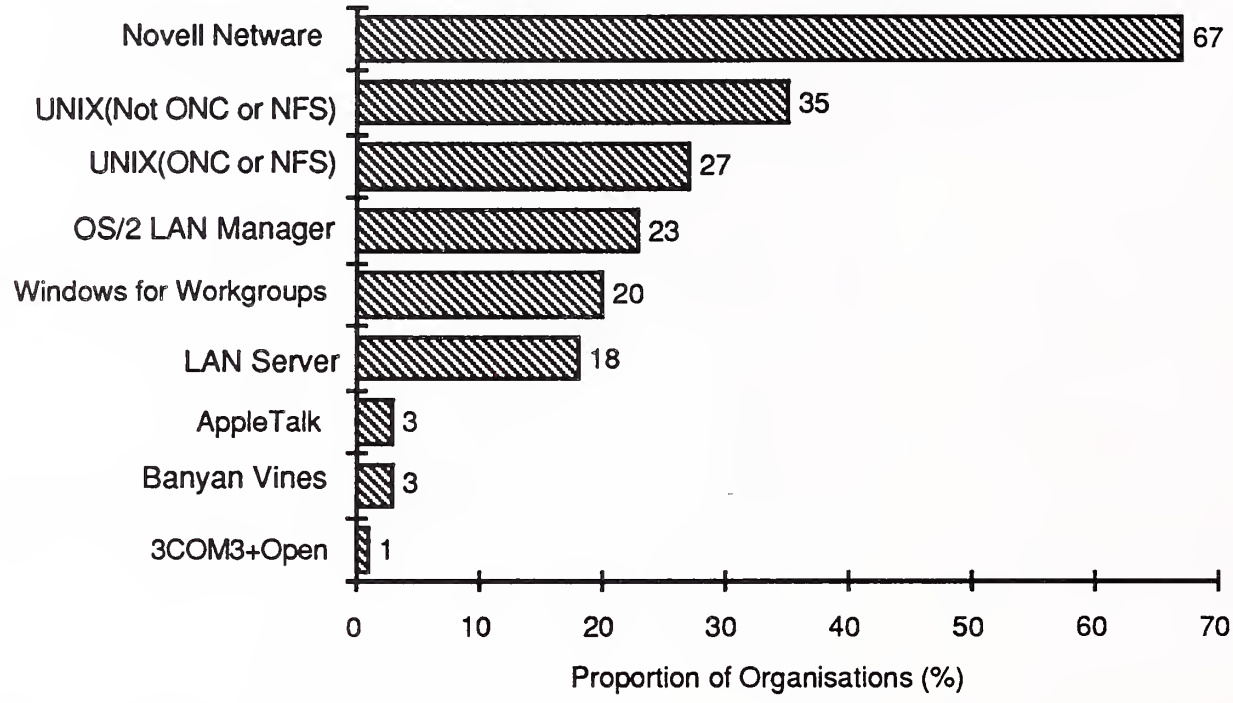
Sample of 90 respondents. *Source: INPUT*

C
LAN Software Products

Despite the variety of available network operating systems, there is a clear market leader in Novell Netware. Two-thirds of organisations surveyed currently use Novell Netware, though in most cases those organisations also use other operating systems. The combined varieties of UNIX rival Netware in popularity, though the single most popular UNIX variety is used in only 35% of organisations. OS/2 LANManager and Windows for Workgroups are both used by between 20 to 25% of companies. A complete usage analysis of network operating systems is shown in Exhibit IV-7.

Exhibit IV-7

Use of Network Operating Systems



Sample of 90 respondents.

Source: INPUT

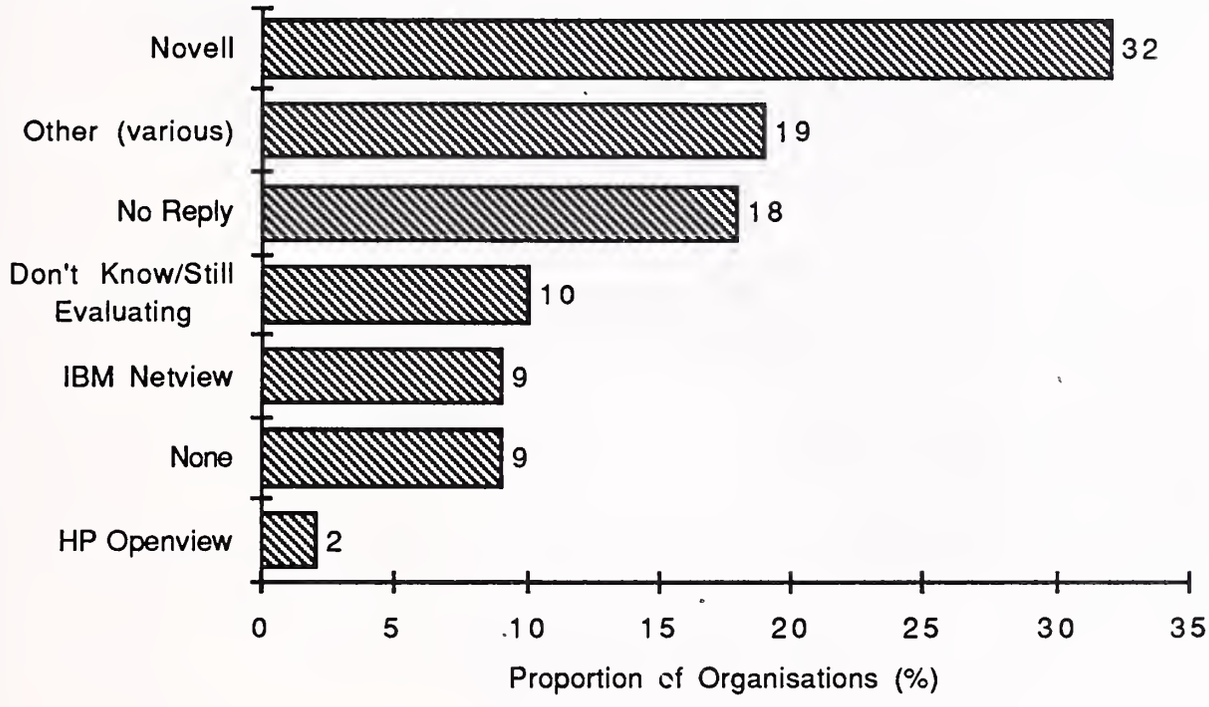
Network management is one of the most complex and confusing areas of networked computing, a fact reflected by the great number of proprietary network management software products currently on the market. Twenty separate network management products were found to be in use in the organisations surveyed, though 34% of companies were using Novell products. The only other product recorded in significant numbers was IBM NetView (used by 10% of companies), though Hewlett-Packard OpenView was in use in 2% of cases.

Currently, 10% of organisations do not use a network management product, 20% are unsure which, if any, products they use, and 10% are currently evaluating products. These statistics are clearly indicative of the confusion surrounding the

issue of network management. Exhibit IV-8 shows the analysis of network management products currently in use by organisations.

Exhibit IV-8

Use of Network Management Systems



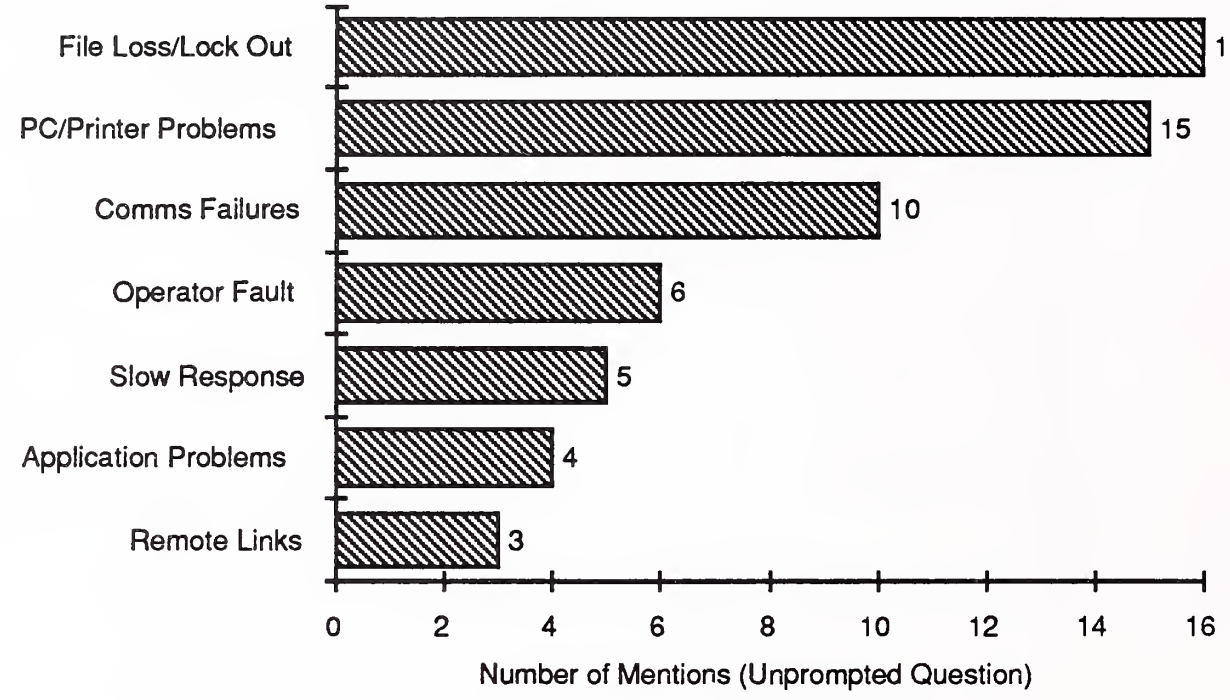
Sample of 90 respondents. *Source: INPUT*

D
LAN Performance Statistics

Users generally report excellent reliability from their LAN systems, with the most common operational problems being related to the use of individual workstations or printers. Exhibit IV-9 shows that difficulties with peripherals, along with file access problems, are the most commonly encountered problems in network usage. Communications failures are also cited, as are response times and operator problems.

Exhibit IV-9

Most Common Operational LAN Problems

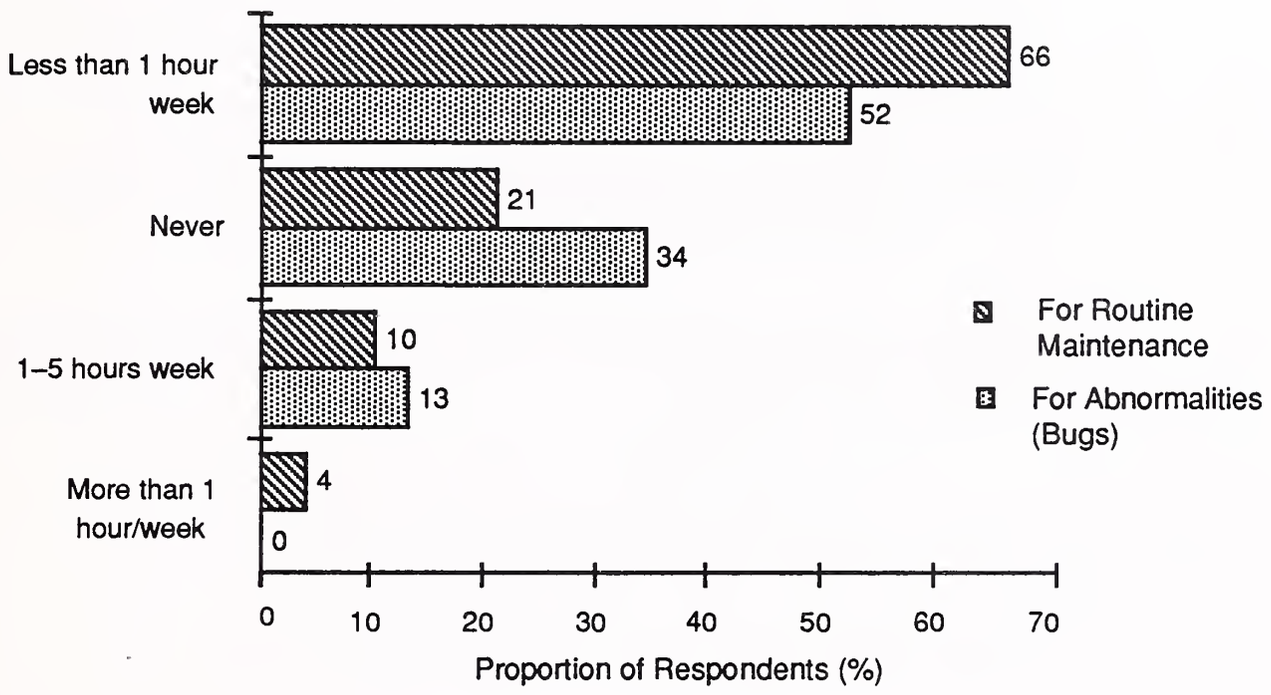


Sample of 90 respondents. *Source: INPUT*

Network downtime is considered to be acceptable to the great majority of users. Exhibit IV-10 shows that downtime is reported to be under an hour per week in the majority of cases. A large proportion of companies (34%) claim no scheduled downtime at all, which reflects the fact that many organisations carry out essential maintenance outside business hours only; significantly fewer companies (21%) can claim zero downtime from abnormal situations (bugs). Very small numbers of users have experienced greater than five hours per week downtime.

Exhibit IV-10

LAN Downtime Statistics



Sample of 90 respondents.

Source: INPUT

E
User Problems with Network Technology

Users face a number of difficulties in using network technology successfully, most of which are related to physical problems. Connectivity, the use of multiple protocols and difficulties with cabling are amongst the greatest concerns. The most frequently mentioned difficulties in using network technology were:

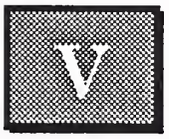
- Compatibility and interoperability
- Multiple protocols and standards

- Installation distances
- Resistance to change

Clearly, users are encountering problems related to the diversity of LAN systems, which reflects the uncoordinated way in which many corporate networks have grown in recent years.

Also high on users' list of concerns are the human problems which LAN-based computing presents. These include the issue of how to realise the full potential of networked systems, given the enormous computing power and information resources available to the average user. Users are also concerned about the provision of adequate training, and claim that there is continuing resistance to the transition from the old datacentre paradigm to a fully distributed computing environment.

The current state of desktop network support services and the implications for customer services vendors are examined in detail in Chapters V and VI.



The Current State of Desktop Network Support

This chapter looks at the provision of support for desktop networks within organisations, including the current support providers and the extent to which users are satisfied with current levels of service.

A
Support Supply Profile

1. Equipment Maintenance

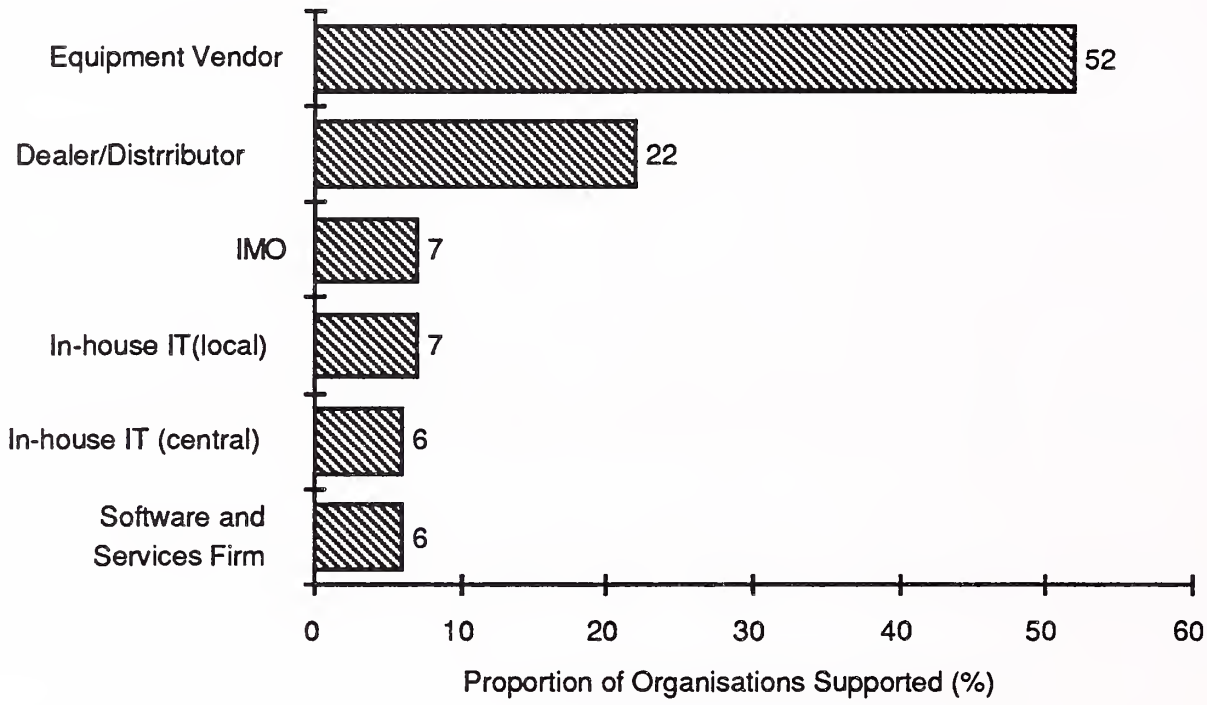
The market for traditional network equipment, server and workstation maintenance is dominated by the equipment vendors, as shown in Exhibits V-1 to V-3. Equipment vendors supply maintenance services in about 55% of the organisations surveyed.

In 20% of cases, maintenance services come from the dealer/distributor channel, while in-house maintenance is undertaken by only 15% of organisations.

Perhaps surprisingly, given the growth of the independent maintenance organisations in recent years, this group commands less than 10% of the maintenance market. The indications are that IMOs are finding it difficult to compete, particularly when price is their principle selling point. Users running mission-critical or mission-sensitive networked applications are less inclined to be swayed by price alone, and value the reliability factor associated with the equipment vendors.

Exhibit V-1

Network Equipment Maintenance Supply Profile

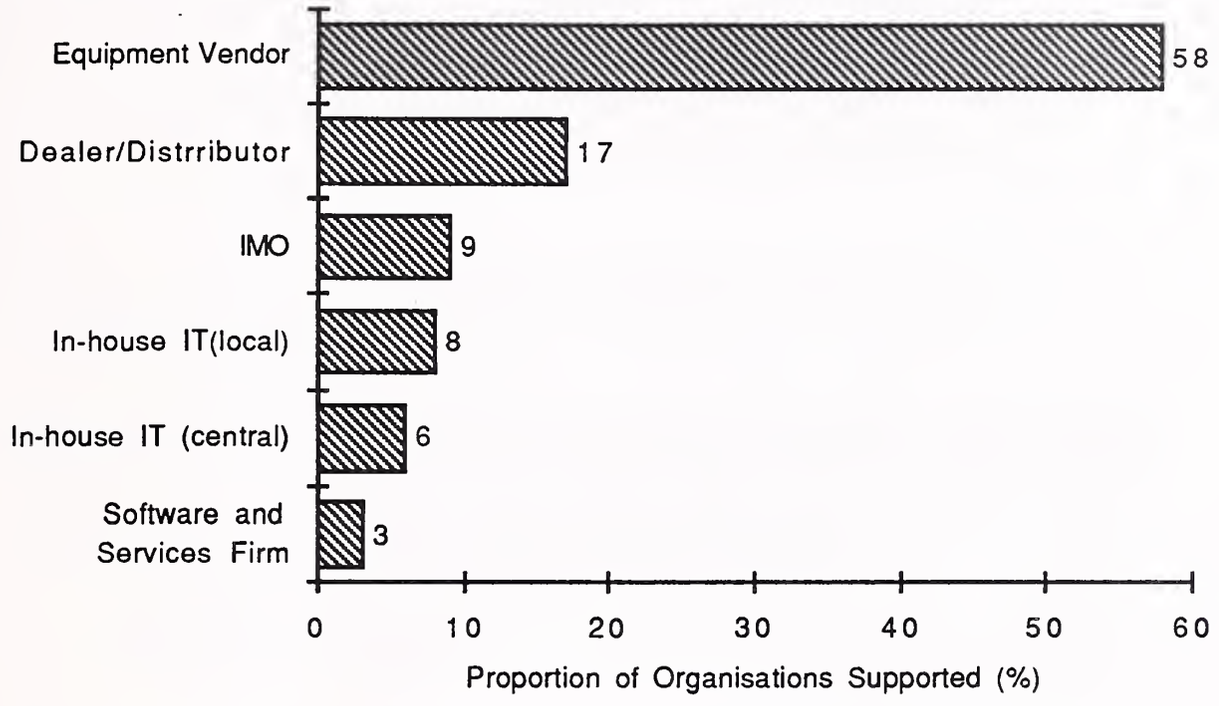


Sample of 90 respondents.

Source: INPUT

Exhibit V-2

Server Maintenance Supply Profile

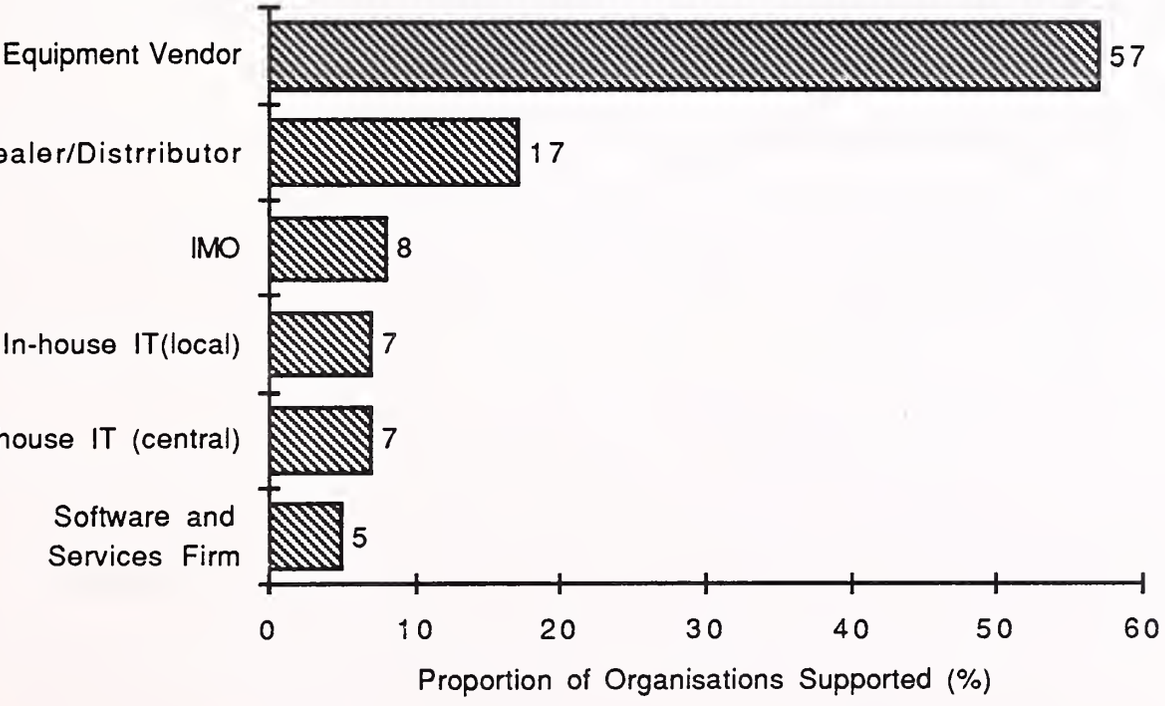


Sample of 90 respondents.

Source: INPUT

Exhibit V-3

Workstation Maintenance Supply Profile



Sample of 90 respondents.

Source: INPUT

The supply profile is consistent across the three maintenance categories, with the following notable variations at country level:

- The equipment vendors have an even stronger hold on the market in Germany (60%) than in France and the U.K.
- There is a stronger tendency for U.K. organisations to use IMOs for server and workstation maintenance (approximately 15%) than their French and German counterparts.

It is important to acknowledge that the maintenance of *network equipment* (including servers) continues to be a growth market, and will be the focus of increasing competition between the equipment vendors, the independent maintenance organisations and the channels. However, desktop computer maintenance is in steep decline (10% negative growth over the next five years). The ultra-reliability of desktop equipment has led many organisations to believe that contract-based maintenance is an unnecessary expense, and many organisations are simply relying on the equipment warranty.

There is also strong evidence that self-maintenance and the use of time and materials (T&M) services are growing in popularity. In the present survey, 64% of users with an equipment maintenance contract said they had considered switching to T&M services, though the likelihood of their making the switch in the next two years was low (2.1 on a scale of 1 to 5).

2. Design and Planning

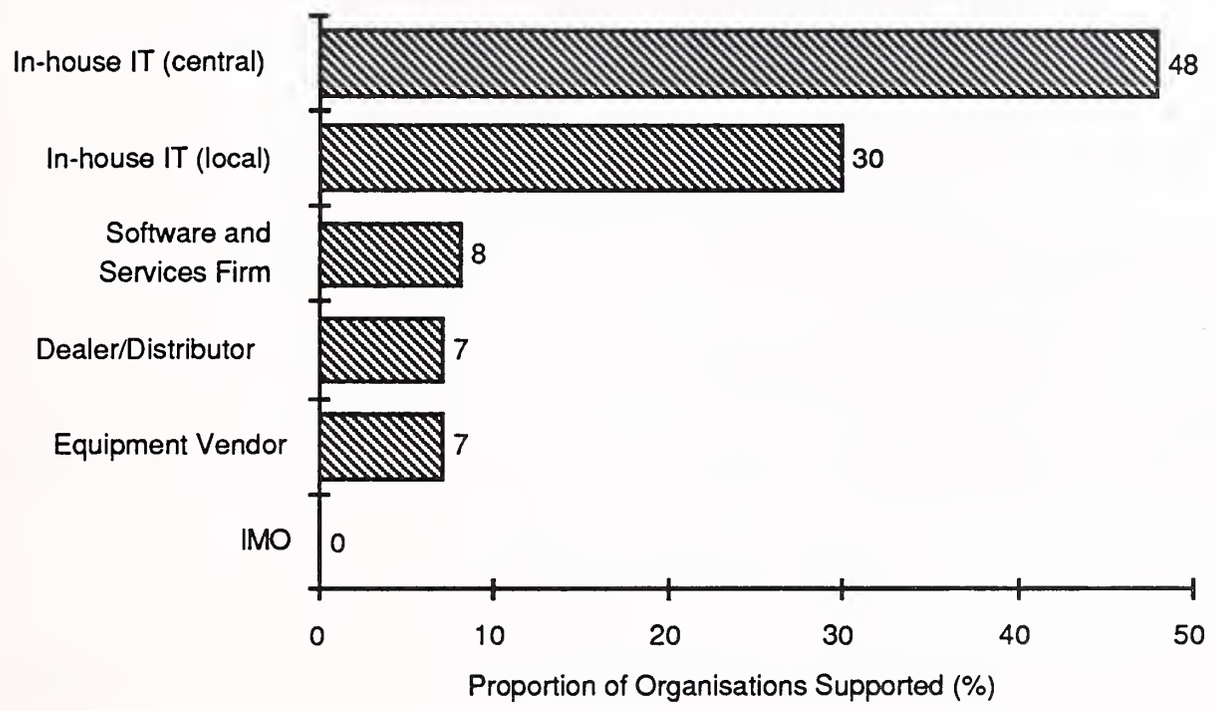
Network design and planning services are performed in-house by almost 80% of organisations surveyed, with the central IS department responsible in most cases (48%). The 22% of companies which use external suppliers show no particular preference for type of supplier. The provision of design and planning services is shown in Exhibit V-4.

The apparent control exercised by the central in-house IS group gives a potentially misleading impression that most companies have a coordinated strategy for network development. However, as mentioned earlier, the reality is that traditionally most companies have had no coherent plan for network development and are now faced with the task of coordinating a variety of diverse, locally developed LANs.

Vendors currently play a relatively small role in assisting organisations with design and network planning, but are in a good position to promote such services to users. The main selling point is that effective design and planning anticipates future network requirements and prevents the sorts of problems which many organisations are now struggling to cure.

Exhibit V-4

Design and Plannning Supply Profile



Sample of 90 respondents.

Source: INPUT

3. Implementation and Installation

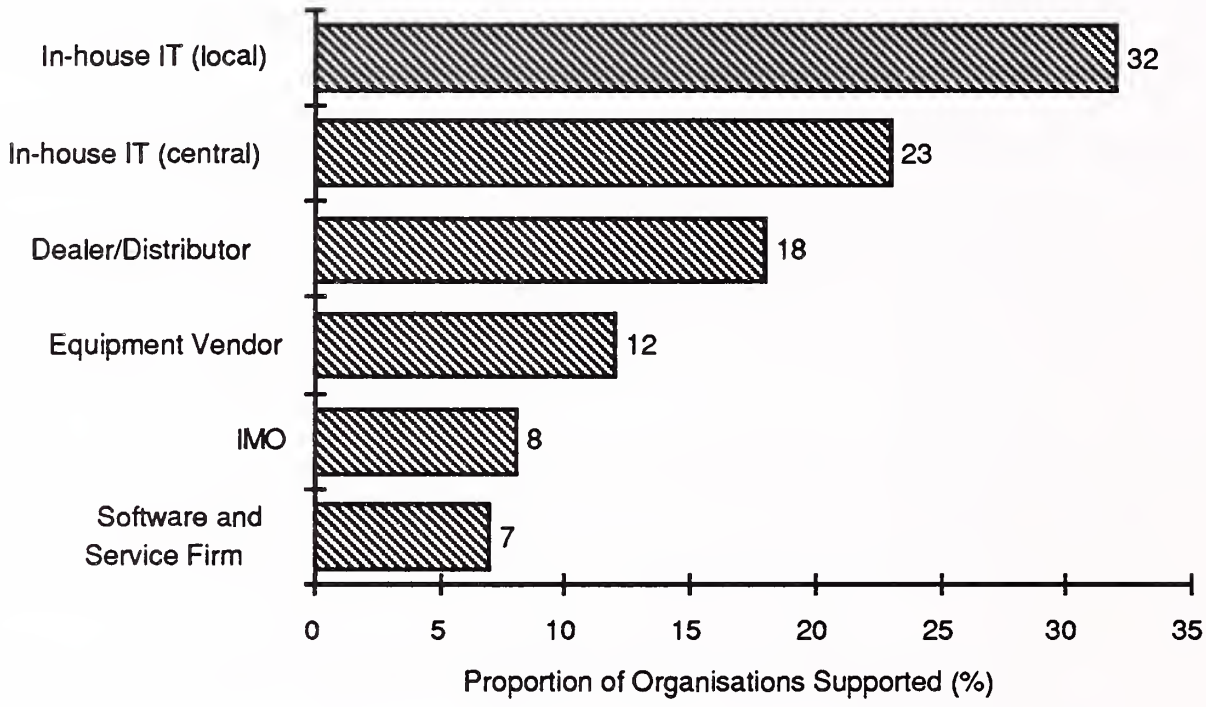
As shown in Exhibit V-5, network implementation services are split more-or-less evenly between in-house IS groups (55%) and external suppliers (45%). The leading third-party suppliers are the dealer/distributor channel (20%).

Network implementation in the sense of cabling and environmental services has become a commoditised market, with severe erosion of margins over recent years. The supply side of the market is fiercely competitive, with many non-IT vendors offering

services at cost or with minimal margins added. Equipment vendors cannot operate with the same cost structure, hence there is little point in targeting this market specifically. However, the best opportunities for vendors lie in the value-added implementation services, where consultancy and project management can be offered as premium services.

Exhibit V-5

Implementation and Installation Supply Profile



Sample of 90 respondents. *Source: INPUT*

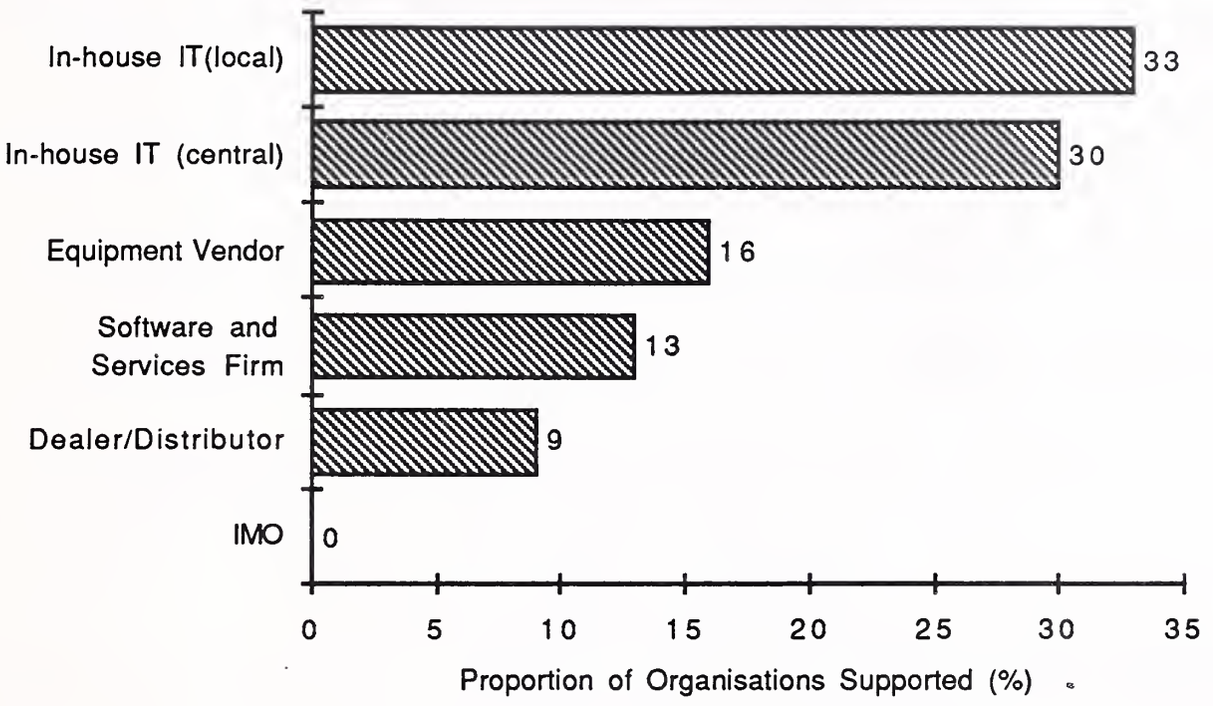
4. Software Product Support

Exhibit V-6 shows the supply profile for software product support, which is predominantly an in-house service (more than 60% of the sample). The equipment vendors are the leading third-party suppliers, with the independent software organisations their closest rivals.

Given the sharp decline in traditional equipment maintenance, and the clear indications that users are planning to increase spending on packaged software and associated support in the near future (see Chapter VI), vendors must look to improve their position in this market. However, they will face a considerable challenge from the dealer channel and independent software and services firms.

Exhibit V-6

Software Product Support Supply Profile



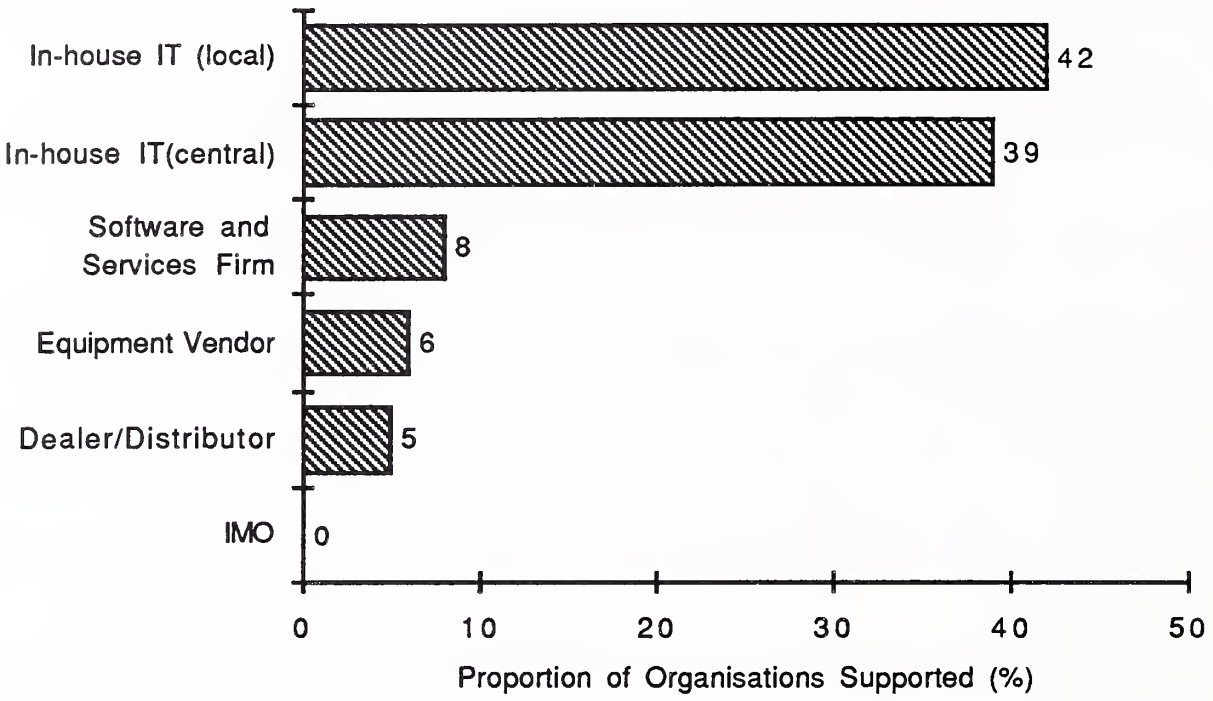
Sample of 90 respondents. *Source: INPUT*

5. Help Desk Services

In-house IS groups are again dominant in the supply of user help desk services, as shown in Exhibit V-7. More than 80% of organisations rely on internal help desk services, a statistic which reflects the specific (and diverse) nature of existing corporate applications. Most users perceive that external vendors are not well-placed to provide effective help desk services for numerous applications, many of which have been designed and written in-house. However, there is some indication that vendors are considered more seriously when it comes to providing second-line help desk services.

Exhibit V-7

Help Desk Services Supply Profile



Sample of 90 respndents. *Source: INPUT*

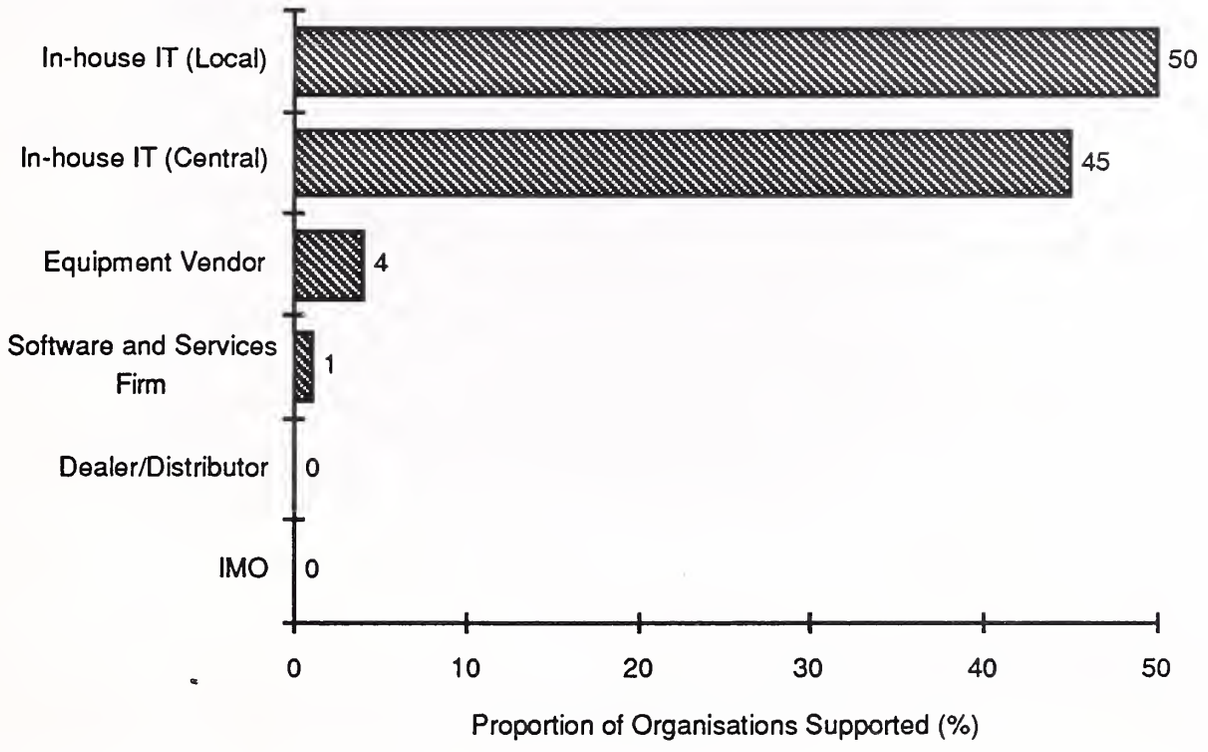
6. LAN Management

Only 5% of the organisations surveyed use third parties for ongoing LAN management services (as shown in Exhibit V-8). Organisations regard LAN management as the most critical network-related service, and to date have been reluctant to use external suppliers, despite the fact that the general level of satisfaction with LAN management is relatively low (see section B). Significantly, the business managers who make up a quarter of the survey sample were only marginally more inclined to favour external suppliers than their IS colleagues.

As described in Chapter III, the market for external network management and monitoring services is forecast to grow strongly as more organisations encounter difficulties with expanding and integrating complex networks. However, vendors will have to work hard to convince organisations of the merits of employing a third party for this critical service requirement. Chapter II contains recommendations for vendors targeting this market.

Exhibit V-8

Ongoing LAN Management Supply Profile



Sample of 90 respondents. *Source: INPUT*

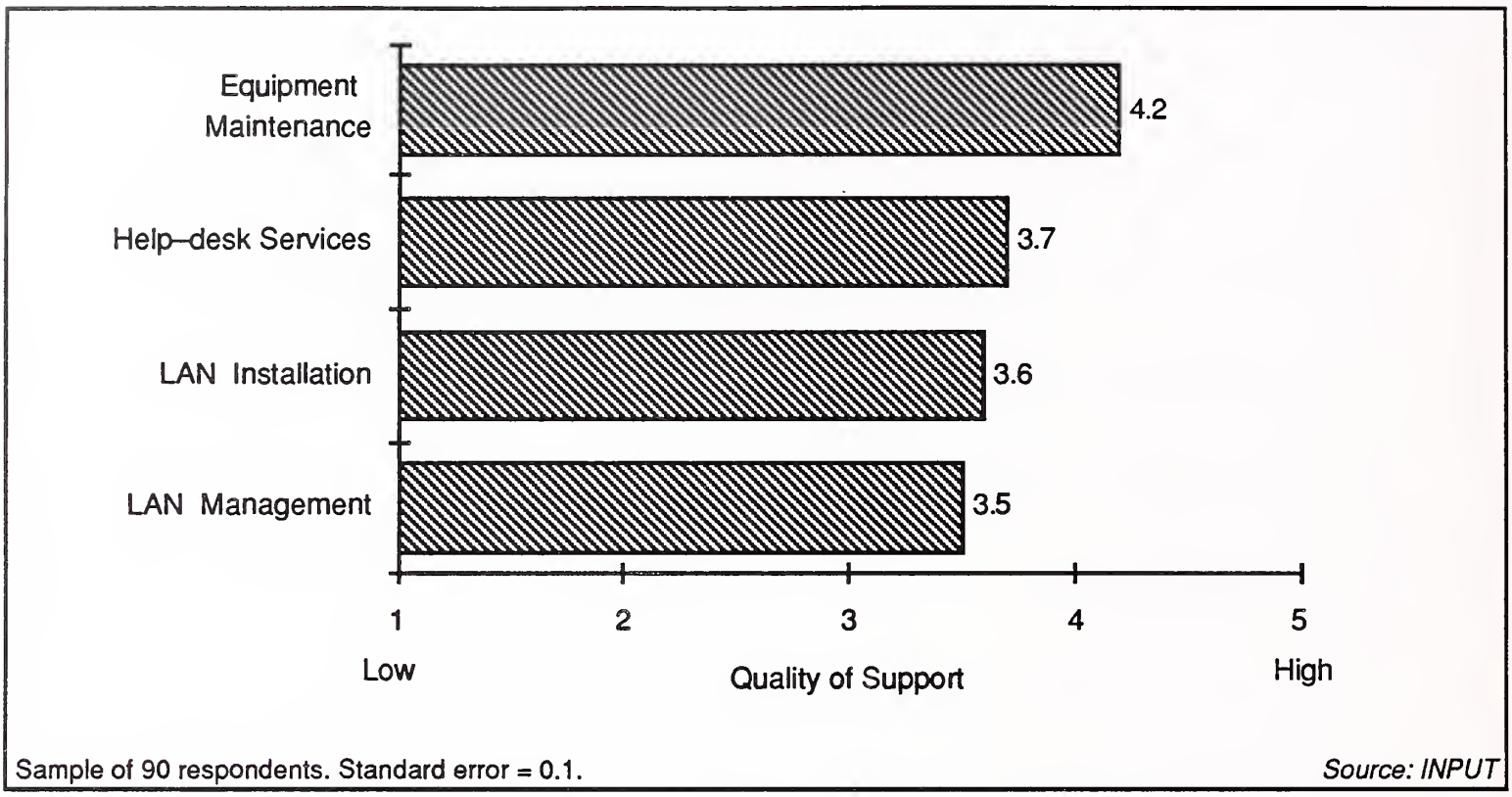
B
Best and Worst Supported Services

Users express widely different levels of satisfaction with the major network support services they receive. However, there is general agreement between users of different types, and in different countries, as to the best and worst supported network services.

Exhibit V-9 shows the services which were rated highest in terms of quality of support.

Exhibit V-9

Best Supported Services

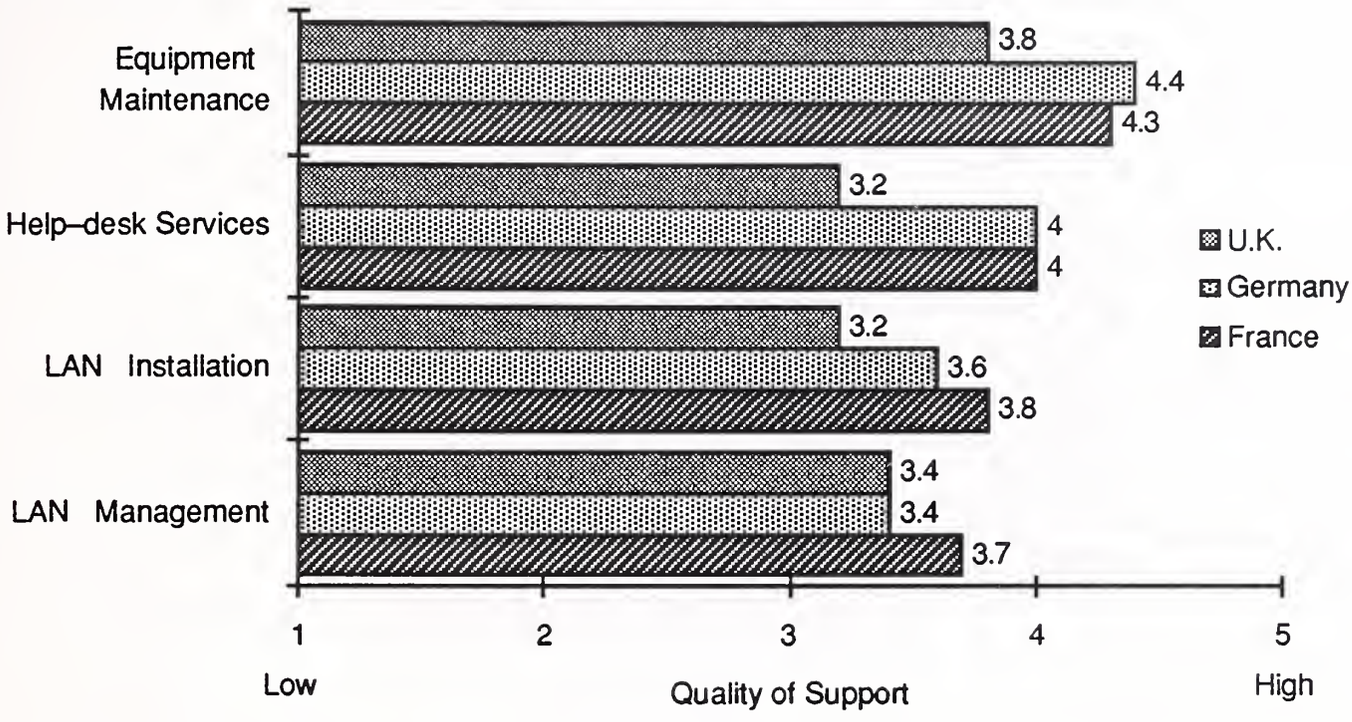


Sample of 90 respondents. Standard error = 0.1. *Source: INPUT*

These ratings are broken down by country in Exhibit V-10. The ratings in France and Germany are notably similar, though the U.K. scores are significantly lower for help desk services and installation.

Exhibit V-10

Best Supported Services by Country



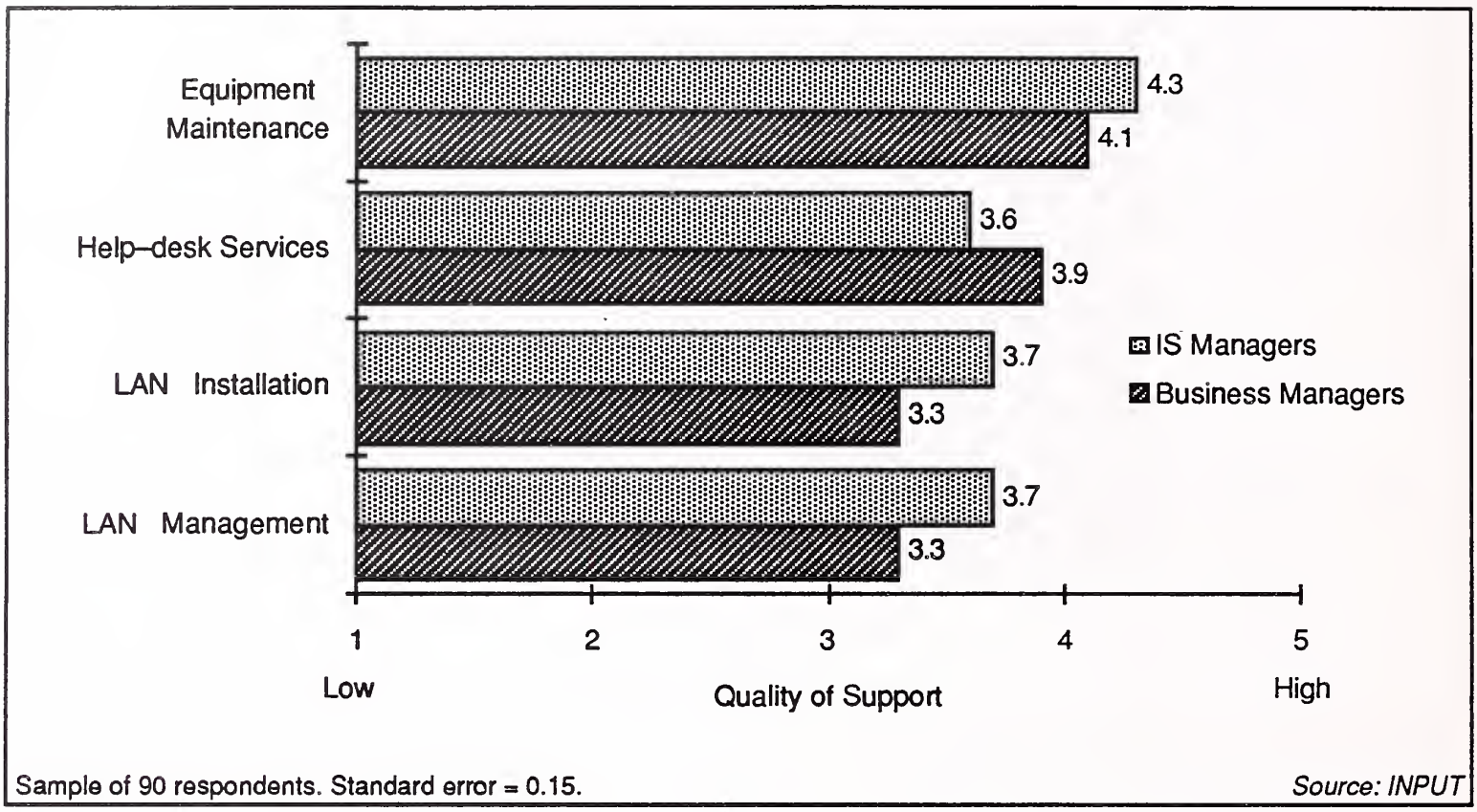
Sample of 90 respondents. Standard error = 0.2. *Source: INPUT*

Exhibit V-11 shows an analysis by user role (i.e., IS manager or business manager). Both groups appear to show reasonable levels of satisfaction with the quality of support, though when the ratings for LAN management are analysed further, only 6% of IS managers expressed signs of dissatisfaction with service quality, compared to 21% of business managers.

Business managers rated the quality of help desk services more highly than their IS counterparts. However, it is important to note that IS managers may well have responded based on their experiences of second-line support received from vendors rather than the provision of first-line support to their own users.

Exhibit V-11

Best Supported Services
IS Manager vs Business Manager Perspective

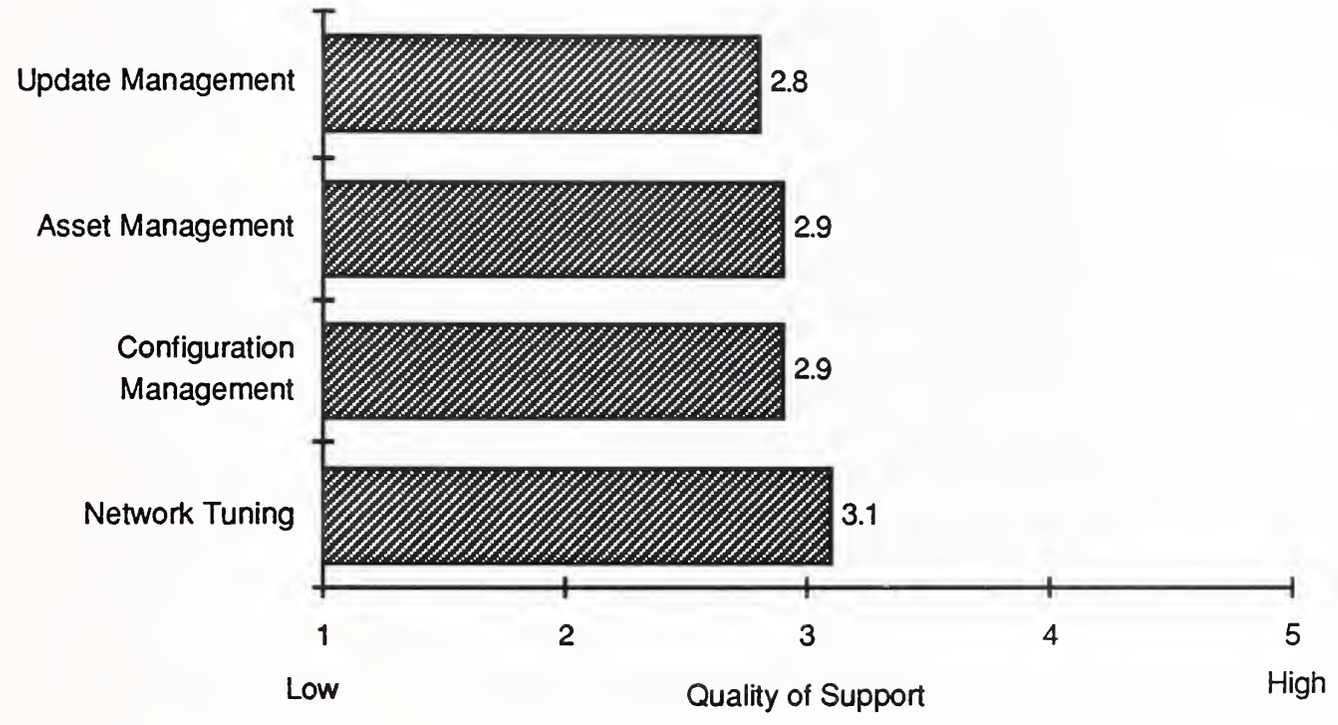


Sample of 90 respondents. Standard error = 0.15. *Source: INPUT*

Exhibit V-12 shows the worst-supported network services, and indicates that configuration management, asset management and update and version control are currently not being properly addressed by organisations. However, these functions are critical to the control of networked environments, and require central coordination. If control is dispersed to local business units, as is the case in more than 70% of U.K. organisations, there is little chance of these functions being effectively coordinated across the whole organisation. This represents an opportunity for services vendors to emphasise their ability to provide an enterprise-wide managed service in these key areas.

Exhibit V-12

Worst Supported Services

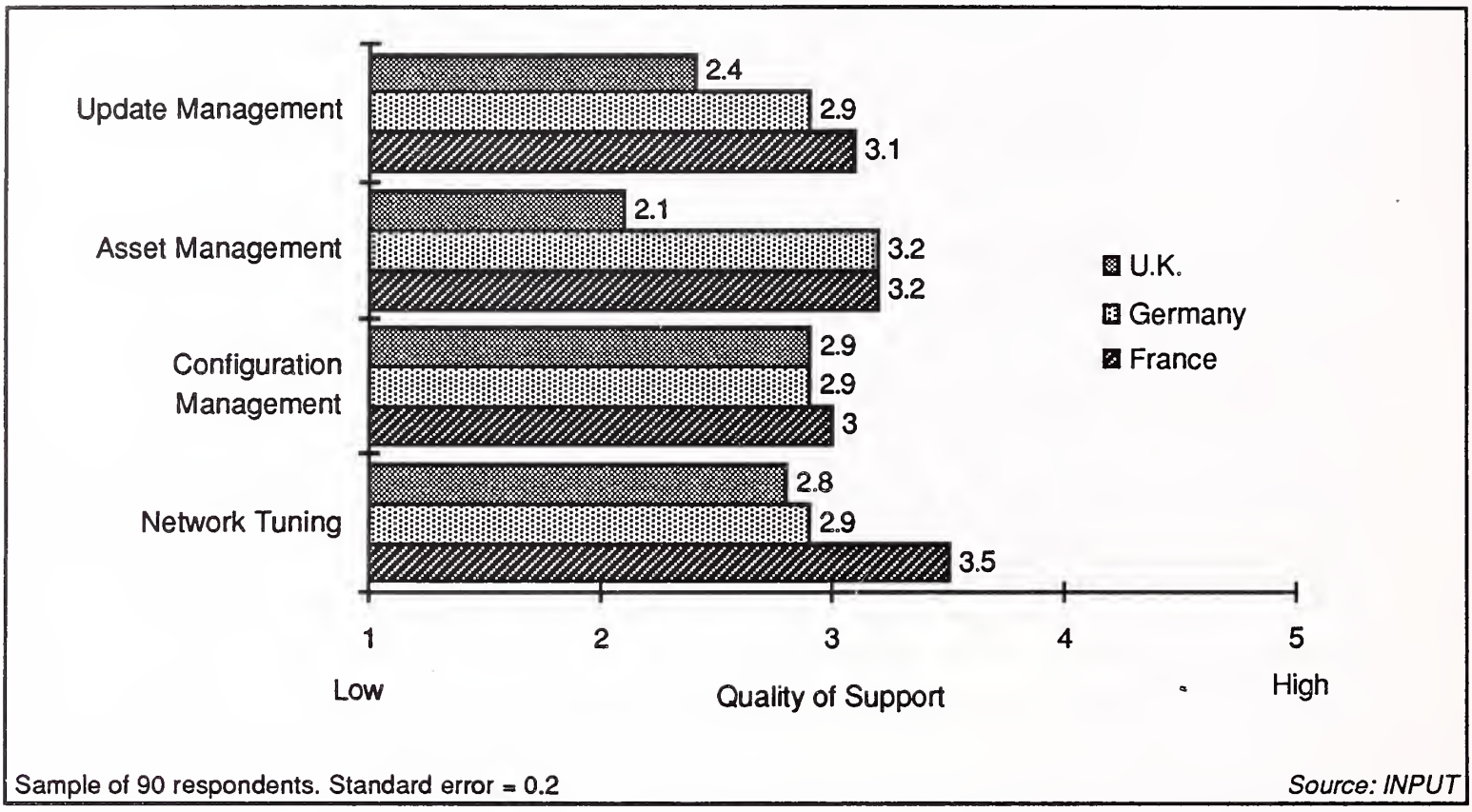


Sample of 90 respondents. Standard error = 0.1. *Source: INPUT*

Exhibit V-13 shows the ratings for the worst supported services by country. Again, the French and German ratings show marked similarity, though ratings for asset management are particularly low in the U.K.

Exhibit V-13

Worst Supported Services by Country

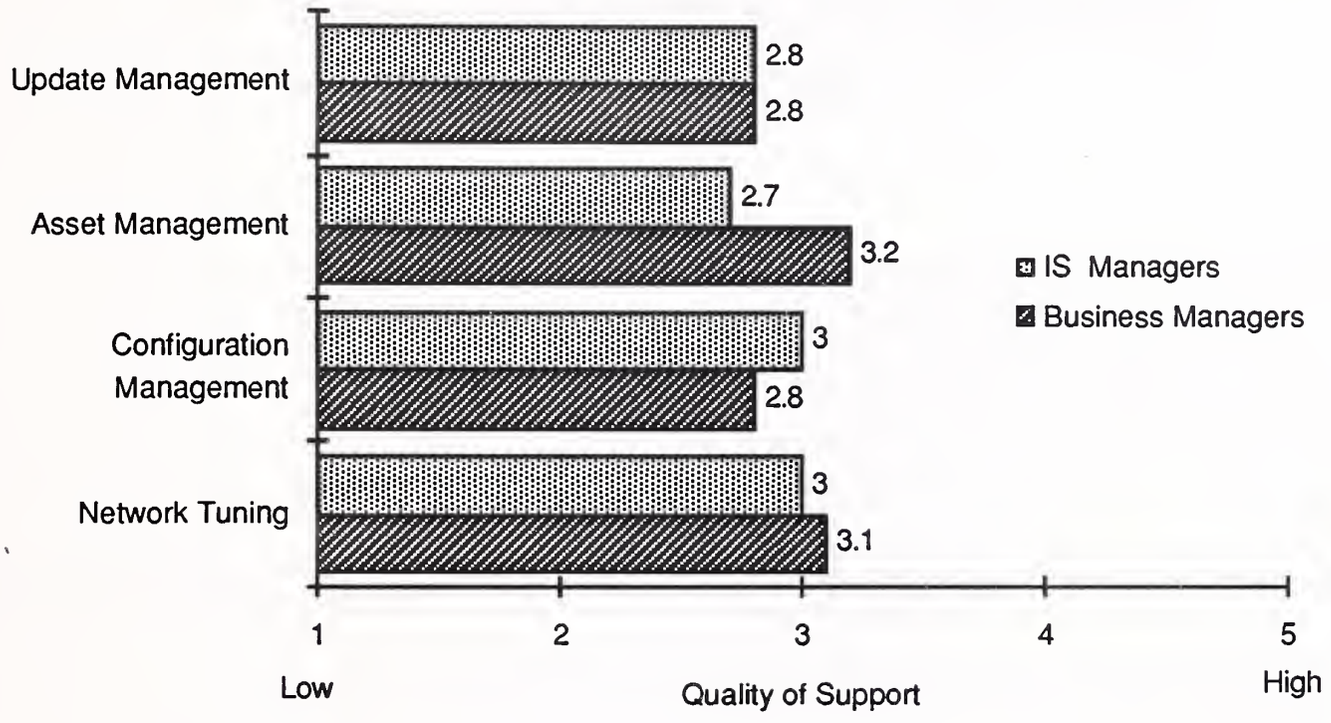


Sample of 90 respondents. Standard error = 0.2 *Source: INPUT*

Exhibit V-14 shows a breakdown by user role (i.e., IS manager or business manager). There is a surprising degree of similarity between the views of the two user groups. The main area of difference is asset management, where IS managers rate quality of support even lower than business managers. Just under a quarter of business managers are dissatisfied with the current quality of asset management, compared to just under half of IS managers. A possible reason for this disparity is that IS managers are more aware of the importance of asset management in supporting distributed computing, but recognise that it is outside their control.

Exhibit V-14

Worst Supported Services—IS Manager vs Business Manager Perspective



Sample of 90 respondents. Standard error = 0.15.

Source: INPUT

Blank

VI

User Intentions for Desktop Network Support

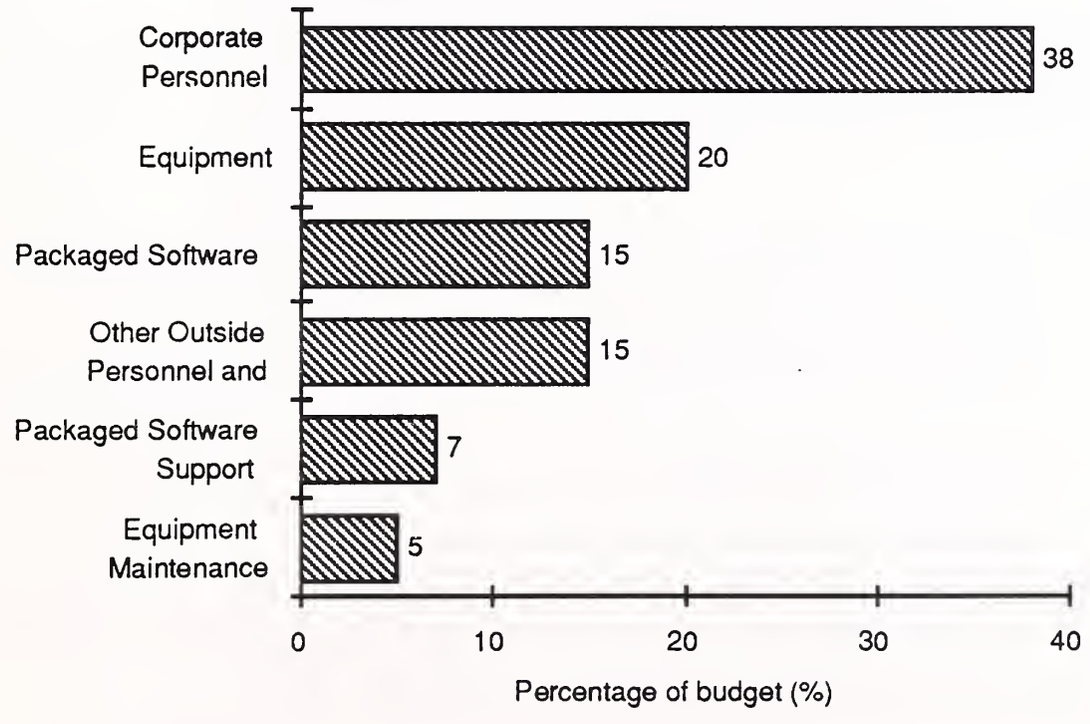
This chapter looks at how users expect their spending on desktop network services to change over the next three years, and indicates significant opportunities for vendors. However, the chapter also examines user attitudes to external service suppliers and reveals the characteristics which users look for when considering using external suppliers.

A
User Spending Intentions Reveal Vendor Opportunities

Exhibit VI-1 shows how organisations currently spend their desktop network IT budget, and Exhibits VI-2 to VI-4 indicate how

Exhibit VI-1

Desktop Network Spending—1994



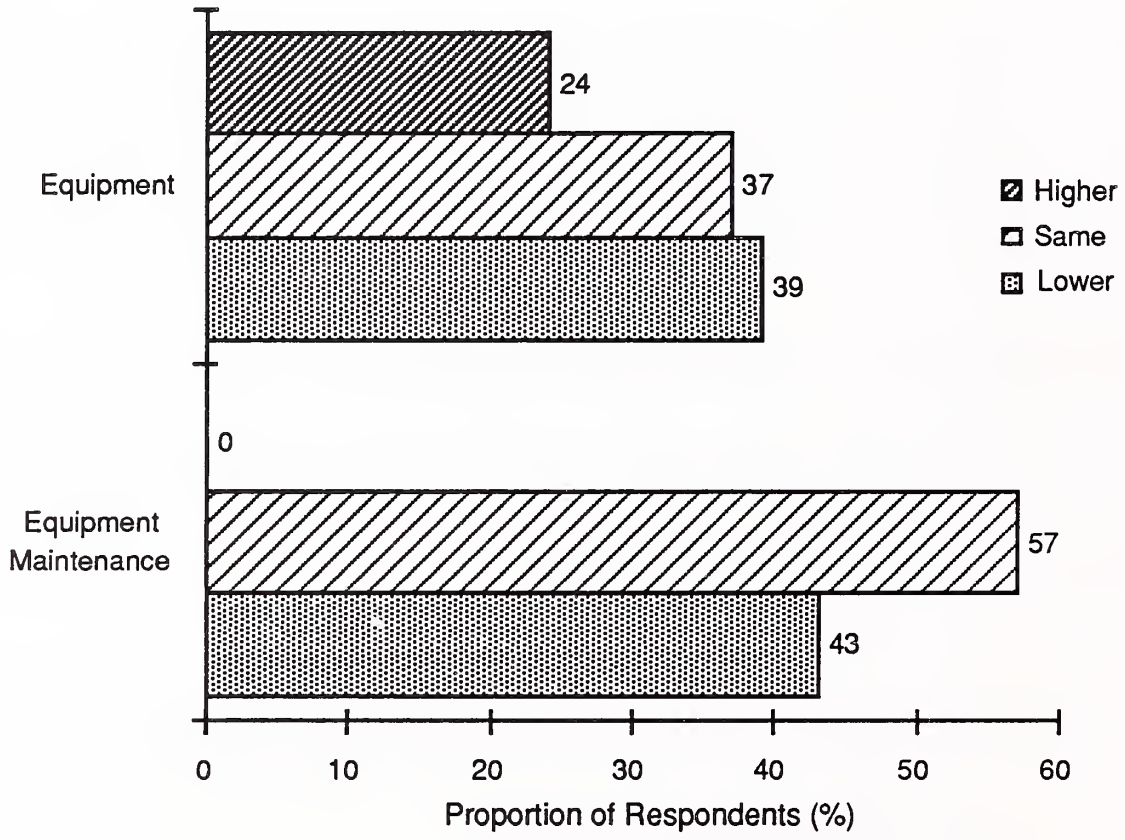
Sample of 90 respondents. *Source: INPUT*

corporate spending patterns are likely to change by 1997.

Users intend to spend more on support in certain areas over the next three years at the expense of fixed overheads. Exhibit VI-2 shows how users anticipate spending on equipment and equipment maintenance to change by 1997.

Exhibit VI-2

Spending on Equipment and Equipment Maintenance by 1997



Sample of 90 respondents. *Source: INPUT*

Over three-quarters of users expect hardware capital costs to be the same or less in 1997 compared with today, while *all* users anticipate spending the same or less on equipment maintenance.

As described in Chapter V, users are increasingly convinced that contract-based equipment maintenance is an unnecessary expense, and many organisations are opting out of formal contracts. It is likely that users will adopt a variety of alternative maintenance solutions in future, but it is clear that traditional contract maintenance is now in steep decline.

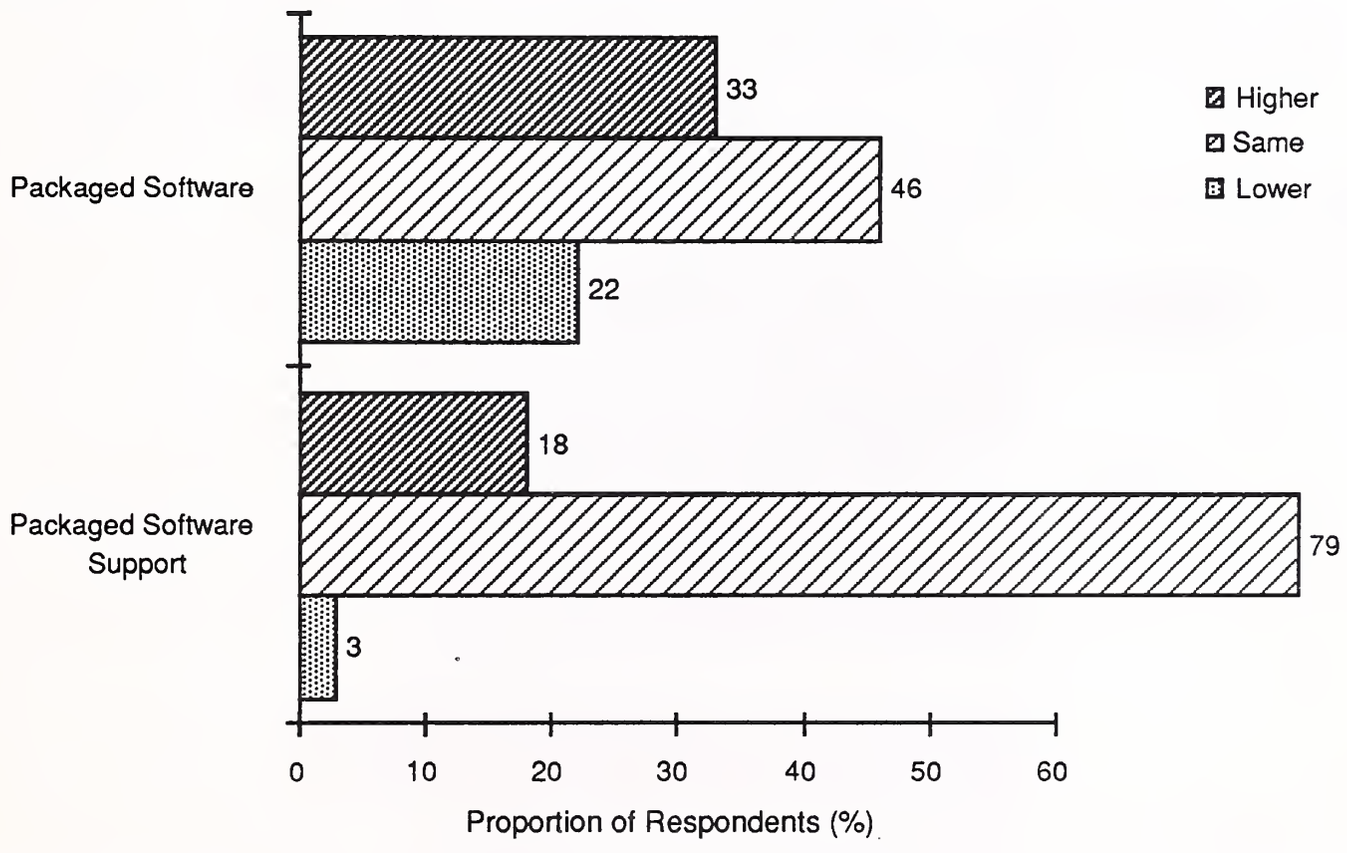
INPUT forecasts the market for software product support related to desktop networks to grow by 15% (CAGR) over the five years to

1999. As shown in Exhibit VI-3, this appears to be supported by users' declared intentions to spend more on packaged software and associated support over the next few years.

However, equipment vendors looking to capitalise on this trend face a considerable challenge from in-house IT groups and other third-party suppliers. As described in Chapter V, equipment vendors currently provide software product support services to about 15% of organisations only.

Exhibit VI-3

Spending on Packaged Software and Support by 1997



Sample of 90 respondents. *Source: INPUT*

The biggest single item of IT expenditure for most organisations is staff costs. The survey revealed that approximately 40% of the LAN/desktop budget is accounted for by corporate personnel, and the indications are that organisations are looking to reduce this considerably.

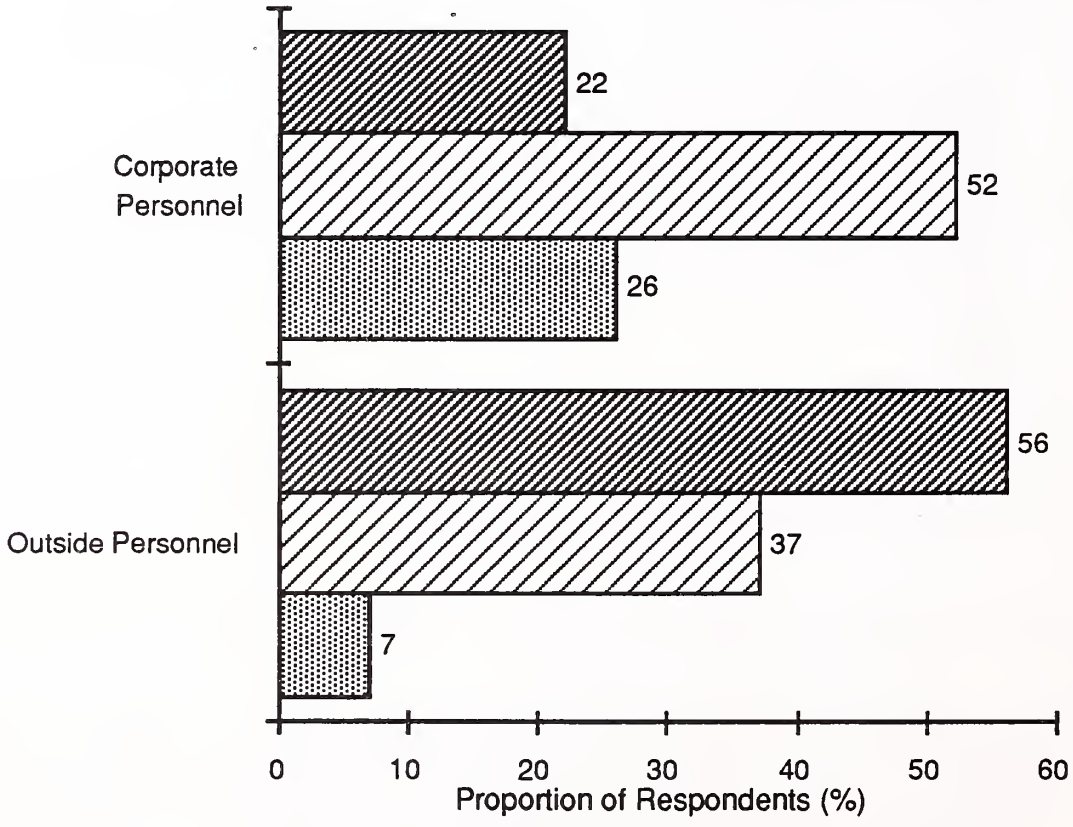
Exhibit VI-4 shows that 78% of users expect to spend the same or less on internal staff in three years' time.By comparison, 93% of users anticipate spending on external services and staff to be the same or higher.

Organisations are preparing to make quite radical changes in terms of the financing and physical provision of IT services. While the number of companies preparing to outsource their desktop services entirely remains relatively small, the market for partially outsourced services looks set to improve dramatically.

This represents an immediate opportunity for vendors. Success in addressing this growing market depends on the speed with which service organisations can refocus their attention on to emerging user needs, and their ability to meet the challenge of independent software and services companies. Vendors can improve their chances of success by focusing on their core technological competences, by selectively reskilling and, where necessary, by building strategic alliances.

Exhibit VI-4

Spending on Personnel by 1997



Sample of 90 respondents.

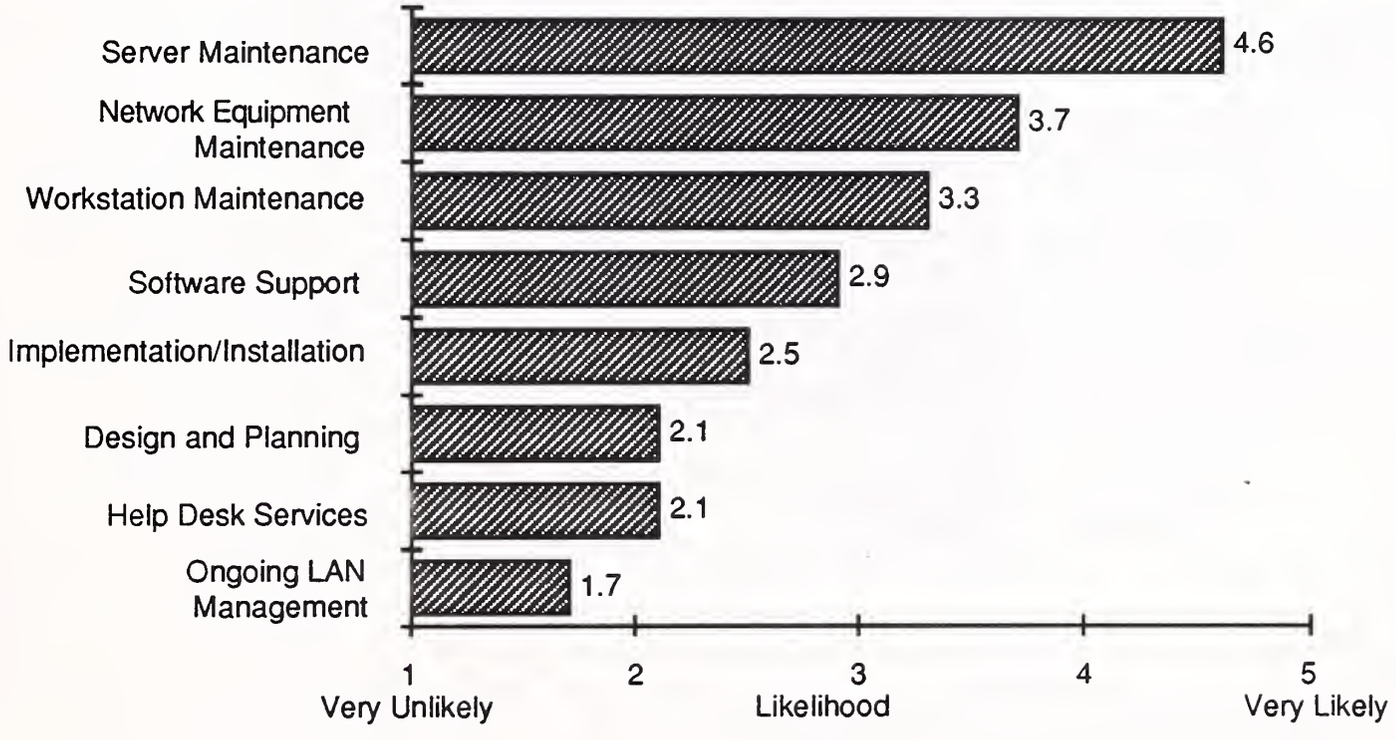
Source: INPUT

B
User Attitudes to Using External Services

When considering user attitudes to using external services, it is important to distinguish between user enthusiasm and the likelihood of actually using a third party supplier. The results of previous surveys have indicated that users are *enthusiastic* about contracting out a variety of network-related services in principle—organisations recognise a number of potential benefits, including improved focus for the IT department and improved end-user productivity. However, the present study reveals that, when asked about the *likelihood* of using external services in the near future, users' answers tend to reflect the current supply profile. Exhibit VI-5 confirms that organisations are likely to use external suppliers for maintenance, and possibly for software support and installation, but are unlikely to go outside for LAN management and help desk services.

Exhibit VI-5

Likelihood of Using External Network Services

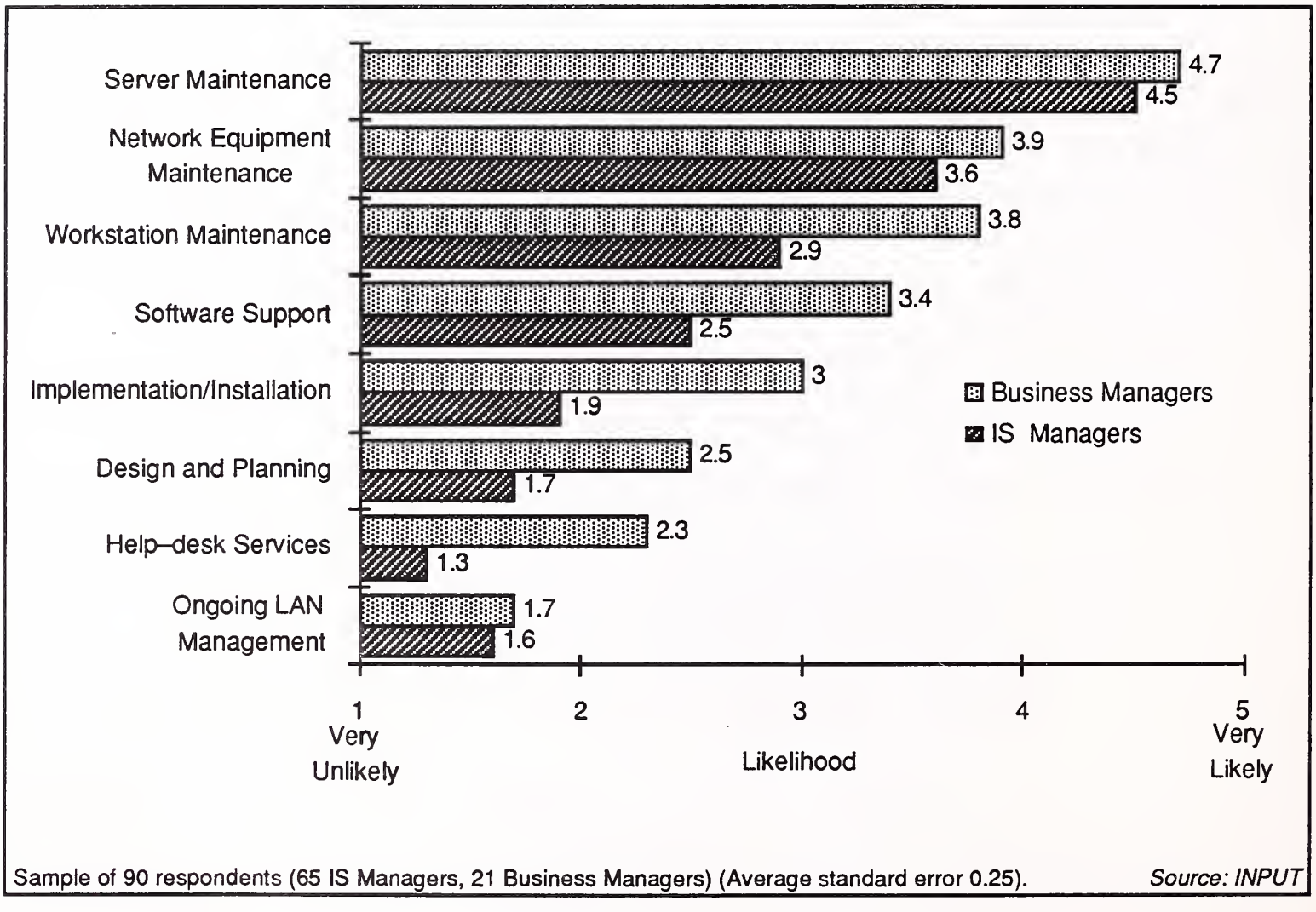


Sample of 90 respondents. Standard error = 0.2. *Source: INPUT*

However, when these results are analysed according to the job responsibility of the respondent (IT manager or business manager), some significant differences are revealed. Exhibit VI-6 shows that in every case, the business managers consider their organisations to be more likely to use outside suppliers in the near future. This indicates a readiness for business managers to change the *status quo*, but they are not necessarily the purchasing authority within the organisation. The strong indication is that IS managers, whether located in a central IT department or within a business unit, still control LAN/desktop spending in the great majority of cases. Appendix B contains an analysis of the control of spending on desktop services within organisations.

Exhibit VI-6

Likelihood of Using External Network Services
IT Manager vs Business Manager Perspective



Sample of 90 respondents (65 IS Managers, 21 Business Managers) (Average standard error 0.25). *Source: INPUT*

C
How Users Select Service Suppliers

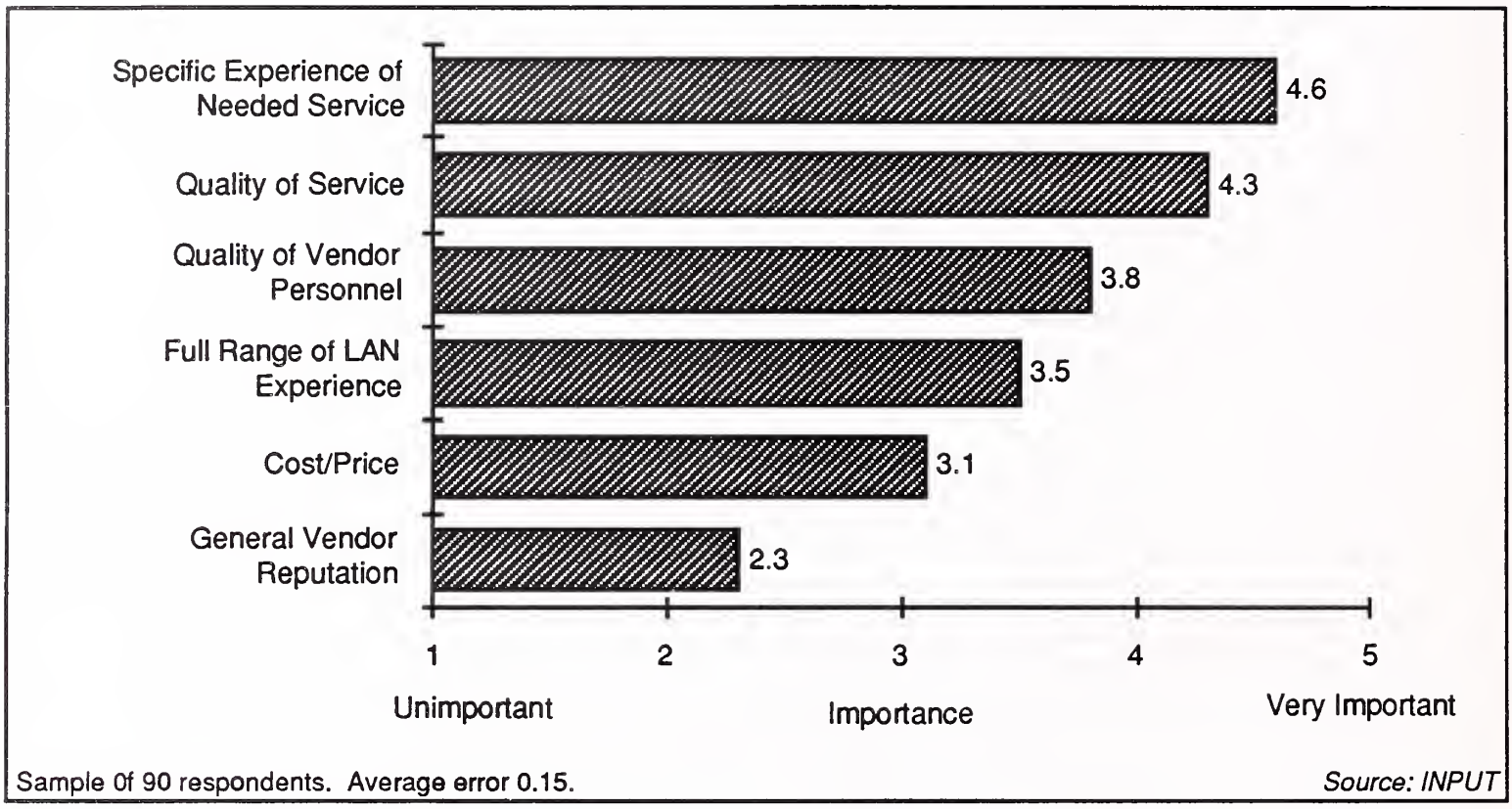
Users are prepared to use external services selectively to help them overcome the complexity of their networked environments. However, as shown in Exhibit VI-7, users are most likely to select vendors who can demonstrate specific experience in the services they require. Users are less impressed by general experience and vendor reputation.

Exhibit VI-7 shows the overall ratings for vendor selection. However, when the ratings of IS managers and business managers are compared, there are a number of differences. Business managers rate overall quality of service as the top priority (rated 4.8 compared to IS managers' rating of 3.8), while IS managers place specific experience as the top priority. Clearly, business managers consider the *concept* of service quality to be paramount, while IS managers take a more pragmatic view based on the importance of selecting services to meet specific needs.

Business managers are more concerned than their IT counterparts about vendors being able to demonstrate a full range of network skills (rated 3.8 compared to IS managers' rating of 3.2). This reflects IS managers' experience of using a variety of service suppliers, and their tendency to select suppliers based on specific needs rather than more general criteria. Finally, business managers and IS managers differ in terms of the importance they attach to service costs. Perhaps not surprisingly, business managers consider this much more important than IS managers (rated 3.5 compared to IS managers' rating of 2.7).

Exhibit VI-7

Vendor Selection Criteria

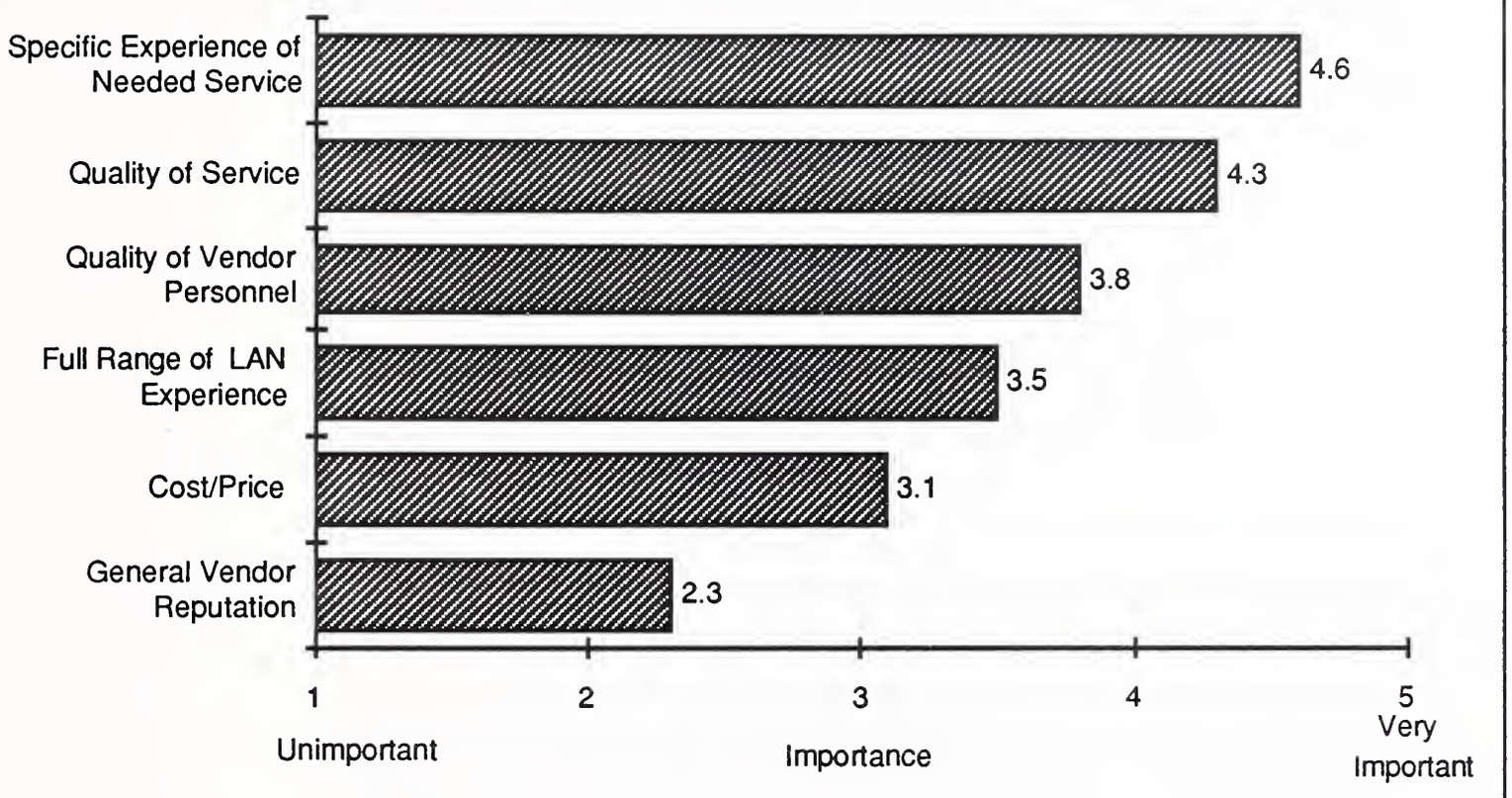


Sample 0f 90 respondents. Average error 0.15. *Source: INPUT*

Interestingly, despite the overall preference for specific skills, user comments suggest that certain combinations of skills such as OS/2 and Novell, or Lotus and Microsoft, are considered valuable but rare. Exhibit VI-8 shows that versatility is perceived to be the most scarce network-related skill. However, while these skill combinations remain scarce, users are most likely to select service vendors on the basis of specific experience and the ability to deliver service solutions which closely match users' individual needs.

Exhibit VI-8

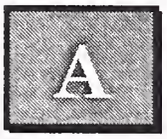
Scarcest Network Skills



Sample of 90 respondents. Standard error 0.2.

Source: INPUT

Blank



Customer Partnerships Play Key Role in Open Services Strategies

This appendix contains the text of a previously published INPUT Research Bulletin which describes how two leading open services vendors are currently addressing the implications of distributed IS responsibility within organisations.

A Introduction

Customer Services vendors have traditionally targeted the central IS department, but are finding increasingly that the IS function is distributed throughout the customer organisation. At the same time, business management and operational user management are becoming more involved in IS decision-making, which presents an even greater challenge for services vendors.

In this climate of organisational change, vendors must achieve broader customer visibility by appealing to different levels of need (see Exhibit A-1). One method of achieving this is to market the concept of partnership, whereby vendors and customers collaborate to achieve tailored service solutions. Two leading vendors currently emphasising this concept in the *open services* arena are Bull and Hewlett-Packard. This bulletin reviews their strategies and examines some of their recent contract successes.

Exhibit A-1

Addressing Customer Needs Within an Organisation

IS Managers	Business Managers	Department Managers
• Ensuring service levels to users • Management and control of IS infrastructure • Service delivery to strict quality standards (ISO9000)	• Ensuring continuity of business operations that depend on distributed IS infrastructure • Enabling focus on core business by outsourcing non-core, routine or difficult IS operational tasks • Help in managing electronic assets, in terms of cost effectiveness and control	• Full support for the resolution of departmental IS problems • Rapid response from support and service engineers at a local level • Better service levels ensured by regularly measured Service-level Agreements

Source: INPUT

B
Bull's TotalCare Customer Services

Bull's TotalCare Services are structured around three elements: systems, desktops and networks. In each of these areas the service offerings are designed to match the typical IS life cycle, from initial consultancy, planning and design, through to implementation, support and operations.

Bull will work with customers to establish which elements of the IS life cycle they can best assist with, and they stress the flexibility of TotalCare in providing a combination of skills and expertise to complement those of the customer. However, TotalCare is also clearly targeted towards those organisations who wish to outsource their entire IS operations.

Bull believes that the geographic spread of its operations makes it a natural choice of service partner. Its support and logistics infrastructure provides worldwide field service, remote maintenance and parts capabilities, while locally managed service delivery operations gives it visibility at national level.

Hervé Scemama, Marketing Director of Bull's Customer Services Division, believes that the recently decentralised service organisation will enable Bull to build customer partnerships worldwide, and says that 'account management will be key to our success in the future'.

Exhibit A-2 shows examples of recent Bull service contracts in Europe and the U.S.

Exhibit A-2

Recent Examples of Bull Customer Services Contracts

Customer	Customer Needs	Solution
Petroleum and oil manufacturer	* Reduce cost of desktop operation * Improve desktop availability to exploit distributed applications * Project management for desktop user base	• Installation and deployment services • Asset management • User support and training services
Electricity company	• Transition from datacentre to a distributed architecture, enabling host/desktop communication	• Phase 1: Cabling and electrical network installation; prototyping of LAN manager • Phase 2: Removal of old terminals; network startup • Phase 3: Full configuration
Headquarters of international hotel chain	• Network expertise to support management of 500 desktops, LAN, mainframe (across 3 sites) • User assistance to exploit distributed applications	• Resolution of network problem using an expert system • Network audit • Help desk

Source: INPUT

C

Hewlett-Packard's Operations Support Services

HP's Operations Support Services portfolio consists of system, desktop and network management components, plus business protection services. HP's marketing position is its focus on client/server environments and its stated intention to help customers improve the effectiveness and efficiency of system operations.

HP is endeavouring to persuade CIOs, in conjunction with CFOs, that they need to balance their use of internal and external resources by entering into *selective outsourcing* partnerships. HP's role in such partnerships can range from offloading routine or difficult operational tasks from the customer, through to integrating IS architectures, applications and systems solutions. Delivery of these services is via HP's Response Centre and Operations Centre Network, which spans 32 locations worldwide.

HP has developed its Operations Support Services portfolio to exploit its technical and market leadership and expertise in managing complex IS environments. In so doing, HP has stated its ambition to become 'the partner of choice for open systems support'.

Three examples of HP's recent contracts in Europe are shown in Exhibit A-3.

Exhibit A-3

Recent Examples of HP Customer Services Contracts

Customer	Customer Needs	Solution
Pharmaceutical Company	• Improve inconsistent desktop service levels • Overcome headcount restraints on IS department	• Help desk services • Service-level metrics implemented • On-site installations
Telecommunications manufacturer	• Finance due to poor cash flow • Improve inconsistent service levels	• Desktop management services • Application help desk • Finance for LAN environment • Equipment procurement • Managed service levels
Worldwide Petroleum Company	• Management for air fuel distribution environment (U.K. airports) • Long-term quality support for custom IS environment	• HP Systems Management Service • HP user help desk

Source: INPUT

Blank

B

IS Managers Continue to Control Desktop Services Spending

This appendix contains the text of a previously published INPUT Research Bulletin which analyses the control of spending on desktop services within organisations.

A Introduction

Traditionally, the IS manager has been the key contact for customer services sales. Thus, the anticipated shift of purchasing power from IS managers to users has given customer services vendors cause for concern. However, according to the results of a recent INPUT survey of 90 European companies, the shift of power is not yet strongly in evidence.

The results of the survey reveal that the in-house IS department is still seen as the major influence in authorising external expenditure on desktop services, while business managers are perceived to have a relatively low level of influence.

More specifically, the survey results indicate that:

- IS managers are in control of desktop services spending in over half the organisations
- User departments are perceived to have more involvement in asset management and version control than in other desktop services
- User departments are perceived to have little or no financial control in the key service area of LAN management

B
IS Managers Make Purchase Decisions in Most Cases

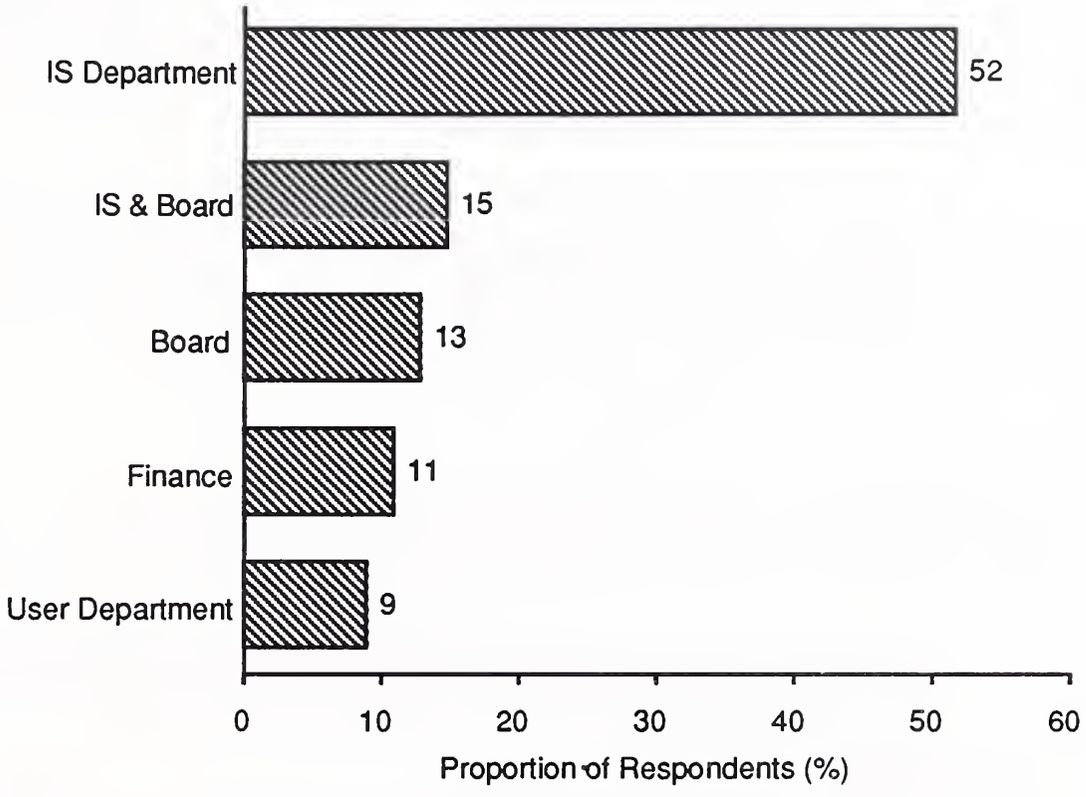
The trend towards users assuming more control over IS decision–making is broadly acknowledged and, as described in Appendix A, is influencing the marketing strategies of some of the leading *open services* vendors. However, as shown in Exhibit B-1, the IS department is still perceived as having control of external IS expenditure in over half of the companies surveyed.

In contrast, user departmental managers are perceived to have financial control in only 10% of desktop service purchasing decisions.

The influence of board level personnel is more significant, with purchasing decisions being made alone, or in conjunction with IS, in roughly 40% of cases. The indications are that the board assumes more control as the value of the services increases. When decisions are being made to outsource a wide variety of desktop services, the CFO and CEO tend to be most influential, and the IS department acts in an advisory capacity in many cases.

Exhibit B-1

Control of Expenditure on Desktop Services



Sample of 90 respondents. *Source: INPUT*

C
Users Influence Asset Management and Version Control

While users have overall control of IS spending in less than 10% of cases, Exhibit B-2 shows that users are perceived to have control over asset management and version control services in almost 20% of cases.

However, there are signs of confusion as to exactly where responsibility for purchasing these key services lies, and a lack of understanding of the critical role of these services. In particular, there was some evidence that respondents perceive *asset management* as simply the auditing of desktop equipment.

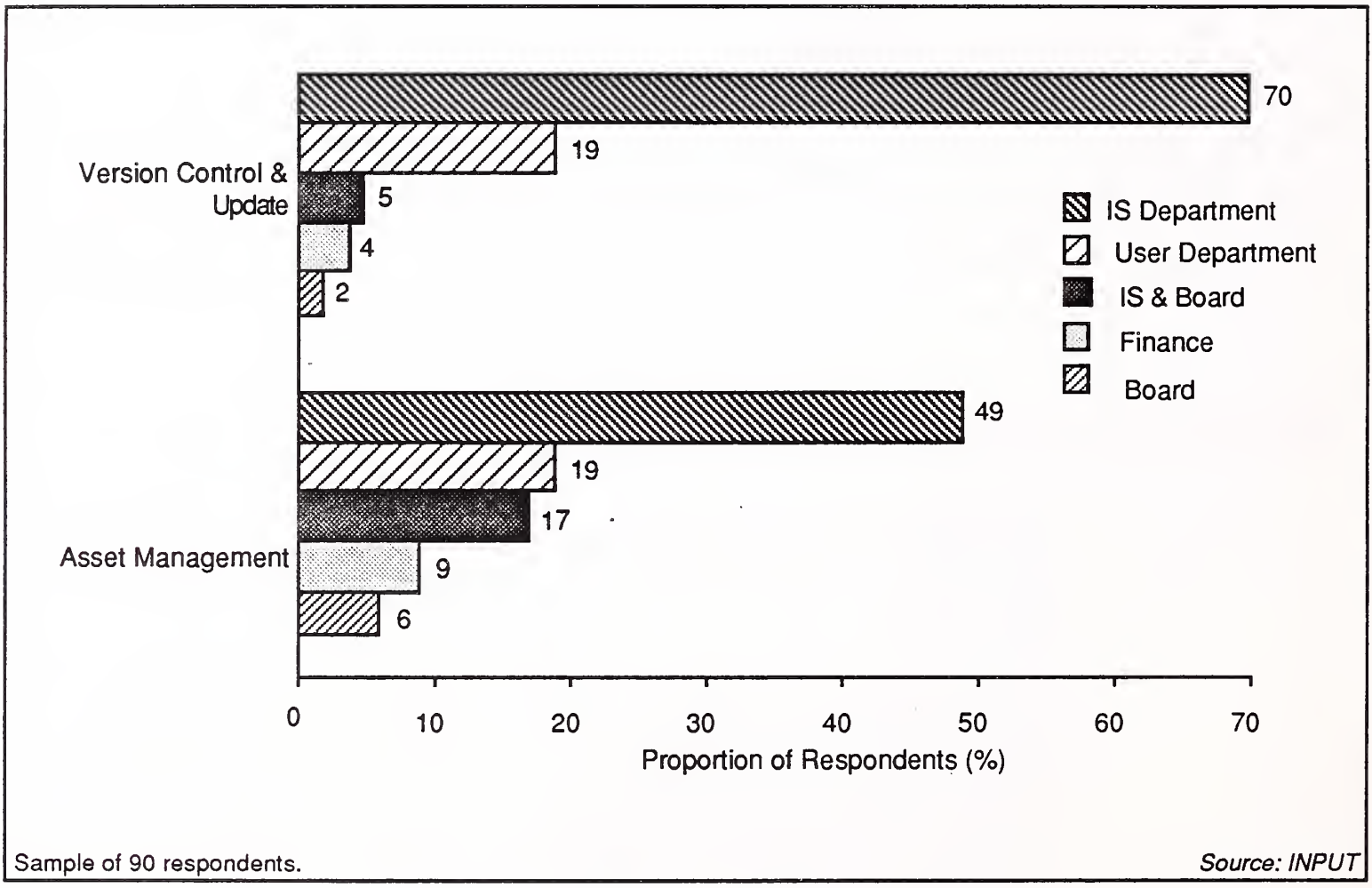
It is therefore perhaps not surprising that asset management, version control and update management are considered by IS

managers and users alike to be amongst the most poorly supported desktop functions. Overall, 46% of IS managers are dissatisfied with the present quality of asset management, compared to 23 % of users.

A possible reason for this disparity is that IS managers are more aware of the importance of asset management in supporting the desktop environment, but recognise that it is not completely under their control.

Exhibit B-2

Control of Expenditure on Asset Management and Version Control



Sample of 90 respondents.

Source: INPUT

D

Users Have Little Control Over LAN Services Spending

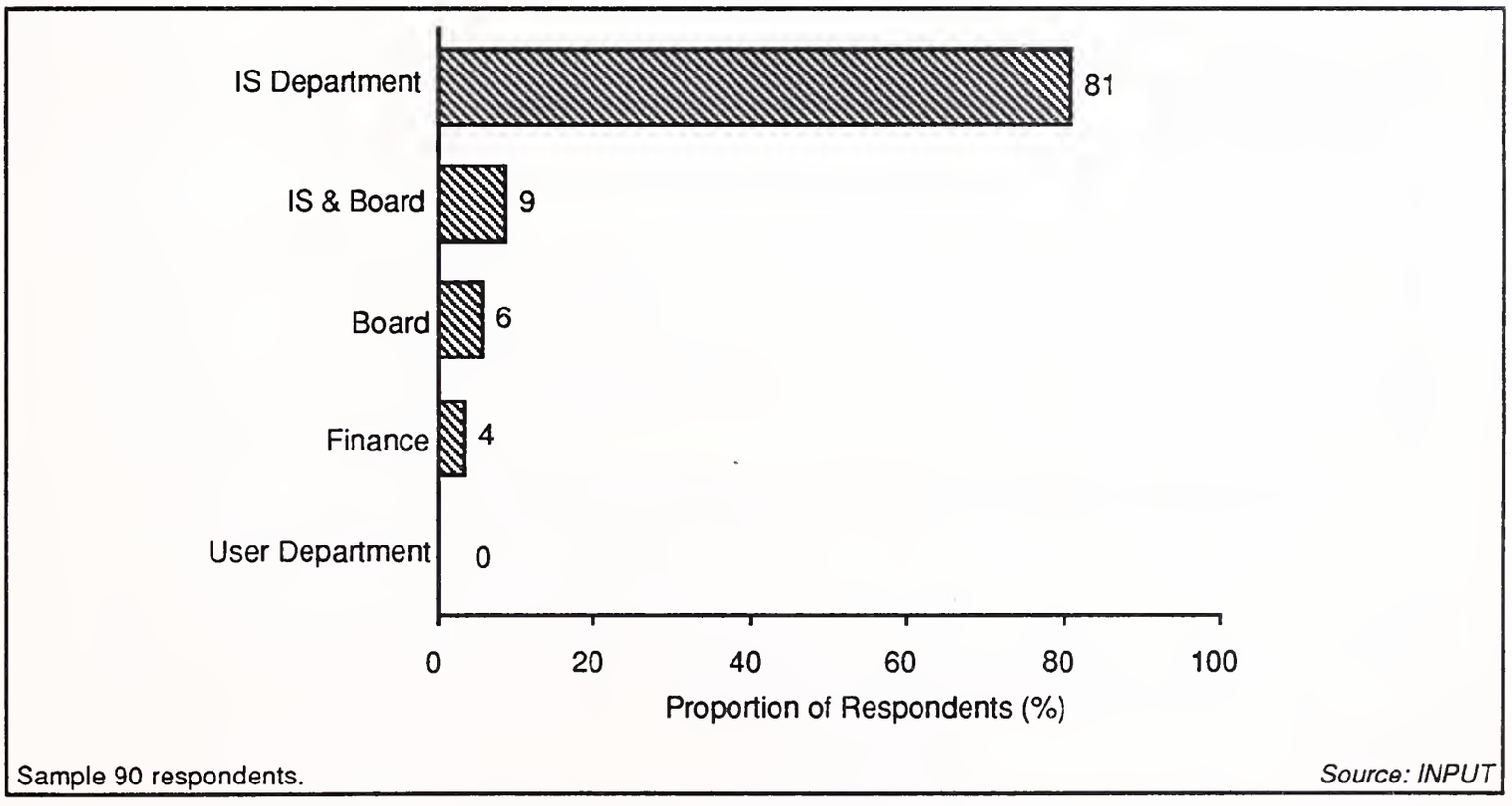
Perhaps the most critical factor in the control of the desktop environment is network (LAN) management. However, as shown in Exhibit B-3, users are perceived to have little or no control over spending in this area.

Though the IS department is seen to have skills traditionally associated with the datacentre, it appears that in the great majority of cases IS managers are in control of spending on the management of distributed computing environments.

Given that LAN-based computing is currently one of the fastest growing IS markets, this is the clearest evidence yet that the anticipated shift of control from the IS department to users is still very much in its infancy.

Exhibit B-3

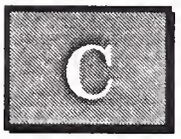
Control of Expenditure on LAN Management



Sample 90 respondents.

Source: INPUT

Blank



User Questionnaire

A. THE BUSINESS ENVIRONMENT

a) Firstly I would like to ask what your role is in connection with your organisation's LAN system? *Please tick below.*

- Directly responsible for managing LANs on a day-to-day basis
- Overall Management responsibility for the business unit/function supported by the LAN
- Other (please define)
- Can approve the purchase of LAN hardware, software and services up to a value of:

currency _____ **amount** _____

b) Could you please tell me how many people do you support in your LAN group?

c) And is your LAN group? *Please tick below.*

- Workgroup
- Corporate location - campus
- Corporate location - single building
- Entire company.

2. What percentage of your users fall into each of the following categories?

IS /System support /Software developers	
Occasional users (<1hour/day) who may print and share files and do some E-mailing	
Part-time users (roughly 1/3 to 2/3 of time spent using the network)	
Heavy users who sit at a workstation all day and use the networked applications (not programmers)	
Total	**100**

3. What roles do the **user workgroups/departments** and the **central information systems** (IS) department play in supporting the LAN systems? How are the roles likely to change (relative to one another) over the next three years?

4. What would you say are the biggest issues/problems that you are facing in utilising LAN technology successfully? How do you see this changing over the next three years?

B. SERVICE ENVIRONMENT

5 a) Who currently provides services to support your LAN installation? Please choose from the categories identified below and indicate the type of service provider (**and** name of vendor wherever possible):

	Provider type	**Provider name (vendor)**
Design and Planning		
Implementation/installation		
Equipment maintenance		
Server		
Network equipment		
Workstations/PCs		
Software support and update management		
Ongoing LAN management		
User help desk services		
Other (please specify)		

Interviewer Note: Please use the following codes for Provider:

E	Equipment vendor	**I**	Independent maintenance organisation
D	Dealer /distributor	**S**	Software and Services firm
C	In-house - central IS	**L**	In-house or local IS team/department team

5 b) If you currently have an equipment maintenance contract, have you ever considered buying equipment services on a time & materials basis? (i.e., as and when you need them) [ ] Yes [ ] No

How likely is your organisation to adopt this form of maintenance in the next two years (a rating from 1 = very unlikely, 5 = likely) _____

6. How likely is your organisation to use outside services for the activities just mentioned, giving a rating from 1 = very unlikely, 5 = very likely?

	Rating
Design and Planning	_____
Workstations/PCs	_____
Server	_____
Implementation/installation	_____
Equipment maintenance	_____
Network equipment	_____
Software support and update management	_____
User Help desk services	_____
Other (please specify)	

_____

_____

	Rating
7. How important are the following criteria when selecting a LAN services vendor, on a scale of 1-5, with 1= unimportant and 5= very important.	_____

Selection criteria	Rating
Having experience in providing the full range of LAN-related services	_____
Specific experience in providing a needed service	_____
Cost/Price	_____
Quality of vendor personnel	_____
Quality of service	_____
General reputation of the vendor	_____
Other (please define)	_____

8. Is your organisation likely to prefer using a single vendor to supply all of your LAN-related support services or to use a combination of specialist vendors? (Please circle)

Why?

- Single vendor
- No preference
- Combination of specialists

_____

_____

_____

9. How important are the following factors in influencing your decision to use an outside services provider?
Please rate on a 1-5 scale, 1= not important at all to 5= very important.

	Rating
Lack of internal skills	_____
Your access to tools	_____
Difficulties in dealing with technological change/improvement	_____
Other (please define)	_____

Comments

10. What LAN-related skills do you think are most scarce?

C. BUDGET

11. How many administrators do you need per user on your network *(e.g. 1 per 30 users)* and what proportion of them are IS staff and users?

12. What is the total cost of managing your LAN installation? *Please define currency used.*

13. Can you give me some idea of how much your organisation spends on LAN systems, broken down into hardware, packaged software, your own staff, and outside personnel and services. Also, how do you expect these proportions to change over the next three years? **(N.B. preference is to obtain total budget in 1994 in local currency and breakdown in %)**

Interviewer Note: Use one of three codes in 1997 column:

L *= Lower* ***H*** *= Higher* ***S*** *= The same*

	Local Currency or % 1994	1997
Hardware		
Hardware Maintenance		
Packaged Software		
Packaged Software Support		
Corporate Personnel		
Other Outside Personnel/Services		
Total		

Comments:

D. PERFORMANCE

14. How often on average is your LAN totally out of operation during normal business hours :

For routine maintenance?	*(Please tick)*
Never	
Less than 1 hour /week	
1-5 hours per week	
Greater than 5 hours/week	
For abnormal bugs?	
Never	
Less than 1 hour /week	
1-5 hours per week	
Greater than 5 hours/week	

Comments:

15. What are the most common hardware and software problems that happen on your LAN? (e.g. printers don't print correctly, network is unacceptably slow, E-mail messages get lost/misrouted, data or files are lost). Please specify:

E. INSTALLATION CHARACTERISTICS

16. How many **client workstations** are you responsible for supporting, purchasing or managing?

17. How many **servers** are you responsible for supporting, purchasing or managing?

---

18. What **system administration** software product do you use (e.g. for setting up passwords) Please name the product and the vendor.

And on a 1-5 scale how satisfied are you with it? _____

What do you see as the advantages or problems associated with using it?

---

19. What **network administration** software product do you use (e.g. for monitoring which nodes are live) ?

Please name the product **and** the vendor.

And on a 1-5 scale how satisfied are you with it? _____

What do you see as the advantages or problems associated with using it?

---

20. What **hardware standards** do you use for connecting client workstations now and what changes (if any) do you anticipate in future?

Twisted Pair Ethernet _____

Ethernet **thin** coax _____

IBM Token Ring _____

ATM _____

Ethernet _____

Ethernet **thick** coax _____

FDDI _____

Not connected _____

In future? _____

21. What **network operating systems** do you use now and what changes (if any) do you anticipate in future?

Novell Netware _____

Banyan Vines _____

OS/2 LAN Manager _____

3COM 3+Open _____

LAN Server _____

UNIX(Sun ONC or NFS _____

UNIX(**not** ONC or NFS) _____

Windows for Workgroups _____

AppleTalk (or Localtalk) _____

LANTastic _____

In future _____

22. Do you connect LANs at remote sites in your organisation and, if so how? Do you anticipate this changing in future?

PC Server to PC Server _____

Through a minicomputer _____

Through a mainframe _____

Public packet-switched network _____

e.g. X25 (and please name vendor) _____

Leased Line _____

Frame Relay _____

ISDN _____

Other (please define) _____

23. What approximate percentage of your clients use the following class of computers:

PC 286 or earlier	_____
386 / 486	_____
RISC-based UNIX with < 32MB	_____
UNIX workstation with >32MB	_____
Other	_____
Total	_____

24. Are there any other issues relating to the support of LAN systems that you believe are important and that we have not covered?

_____

_____

Thank you

Blank